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The  
New Practical  
**Window Gardener**



JOHN R. MOLLISON.



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STAGE SET FOR THE PRODUCTION

# THE NEW PRACTICAL WINDOW GARDENER

BEING

PRACTICAL DIRECTIONS FOR THE CULTIVATION OF FLOWERING AND  
FOLIAGE PLANTS IN WINDOWS AND GLAZED CASES,

AND

THE ARRANGEMENT OF PLANTS AND FLOWERS FOR THE  
EMBELLISHMENT OF THE HOUSEHOLD.

BY

JOHN R. MOLLISON.

ILLUSTRATED WITH COLOURED PLATES AND WOOD ENGRAVINGS.



LONDON:  
GROOMBRIDGE AND SONS.  
1877.

191. h. 11. 1.

From breezy fields and leafy woods ye come,  
    Arrayed in fragrant beauty, to delight  
With dreams of rural life my city home,  
    And please my fancy with your welcome sight.  
My darling wild flowers, happy friends were we  
    When we forgathered in your cool retreats;  
Fain would I roam the woods again with thee,  
    Far from this weary wilderness of streets.  
I feel again the fragrant summer rains;  
    I breathe again the freedom of the hills;  
I hear again the music of the lanes;  
    Joys nigh forgot my heart with rapture fills,  
When in the city's crowded street or lane  
I hail thee, children of the woods, again.

J. R. M.

## CONTENTS.

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| CHAP.                                                                      | PAGE |
|----------------------------------------------------------------------------|------|
| I. INTRODUCTORY REMARKS . . . . .                                          | 1    |
| II. SUITABLE POTS, VASES, AND HANGING BASKETS . . . . .                    | 6    |
| III. THE WINDOW BOX . . . . .                                              | 10   |
| IV. THE WINDOW GREENHOUSE . . . . .                                        | 22   |
| V. SOIL AND DRAINAGE . . . . .                                             | 32   |
| VI. POTTING AND WATERING . . . . .                                         | 38   |
| VII. FILLING WINDOW BOXES . . . . .                                        | 44   |
| VIII. ON PLANTS IN OUR DWELLINGS. ARE THEY BENEFICIAL<br>OR NOT? . . . . . | 52   |
| IX. ON THE GENERAL CARE OF PLANTS AND THE WINDOW<br>GREENHOUSE . . . . .   | 56   |
| X. INSECTS; THEIR PREVENTION AND CURE . . . . .                            | 62   |
| XI. PROPAGATION AND TRAINING OF PLANTS . . . . .                           | 66   |
| XII. SELECT FLOWERING PLANTS SUITABLE FOR WINDOW<br>GARDENING . . . . .    | 73   |
| XIII. BULBOUS, ROOTED, AND ROCK PLANTS . . . . .                           | 82   |
| XIV. HARDY FERNS FOR WINDOW GARDENERS . . . . .                            | 98   |
| XV. HARDY FERNS ( <i>continued</i> ) . . . . .                             | 109  |

| CHAP.                                                                 | PAGE |
|-----------------------------------------------------------------------|------|
| XVI. GREENHOUSE FERNS AND MOSSES . . .                                | 113  |
| XVII. PLANT GROWING IN WARDIAN CASES . . .                            | 118  |
| XVIII. FILMY FERNS IN CASES AND UNDER BELL-GLASSES . . .              | 128  |
| XIX. POT-PLANTS FOR WINDOWS, AND THE LABELLING OF SPECIMENS . . . . . | 137  |
| XX. BALCONY AND AREA GARDENING . . . . .                              | 142  |
| XXI. THE FLORAL DECORATION OF ROOMS, HALLS, AND PASSAGES . . . . .    | 154  |
| XXII. MONTHLY CALENDAR OF OPERATIONS . . . . .                        | 169  |
| XXIII. CONCLUDING REMARKS ON WINDOW GARDENING . . . . .               | 178  |

---

|                                                                                                           |     |
|-----------------------------------------------------------------------------------------------------------|-----|
| ALPHABETICAL LIST OF PLANTS SUITABLE FOR WINDOW AND BALCONY GARDENS AND THE DECORATION OF ROOMS . . . . . | 182 |
|-----------------------------------------------------------------------------------------------------------|-----|

# THE NEW PRACTICAL WINDOW GARDENER.

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## CHAPTER I.

### INTRODUCTORY REMARKS.

**A**DAM was the first man, and being placed in the garden of Eden "to dress it and to keep it," he was thus also the first gardener, and ever since he tended the lovely flowers of Paradise the love of flowers and gardening has become so natural to the human heart that we all, more or less, feel its influence. There are very few who do not turn with pleasure to look at a beautiful flower, or who wandering abroad in nature's own wild garden do not delight in the pretty little daisies, bluebells, forget-me-nots, and all the host of floral gems that bloom in their sweet, wild beauty everywhere, in wood and field, by stream and hedgerow; or who do not feel it to be one of the richest treats to stroll through a modern flower garden where Flora reigns supreme in all the gorgeous colours of the rainbow, dazzling the eyes with her splendour and magnificence.

In the present age the science and practice of gardening has risen to a height of perfection never before

attained, and modern florists have brought into repute hosts of varieties of flowers and plants which our forefathers never even dreamed of; and of all countries in the world Britain stands first for her gardens. With us it may be said that we have reached the height of perfection in the taste and beauty of design displayed in our gardens, while our collectors and botanists have gone forth to all the ends of the earth, returning laden with all that is good, and beautiful, and rare in flowers and plants till we are surrounded with the richest gems of nature, and our gardens and greenhouses display to the wondering eyes representatives of all the varied tribes in the vegetable kingdom.

Every one delights in possessing a flower, from the poor in the back lanes of the city, who treasure their one little plant, struggling for existence in the poisoned atmosphere, to the wealthy with their gardens and plant-houses stocked with all the rarest plants and flowers that money can procure.

The love of flowers arouses within us all the kindest feelings of our nature, humanises the heart, and fills the mind with pleasant ideas and associations. Many a one has been saved from alluring temptations that might have been his ruin, by his spare time being taken up with his love for gardening; the cultivation of his garden-plot, and the tending of his flowers, proving far more attractive than the company of idle companions or the false pleasures of the beershop. What a pleasant sight it is to see the cottager thus attending to the beauty and comfort of his home. Truly the love of flowers is one of the best agents of the temperance

cause ; all friends of the movement should ever make it their endeavour to arouse their hearers to its importance and encourage the establishment of cottagers' flower shows ; for the healthy rivalry engendered by them works like a charm for the general benefit of the district in which they are held.

The lover of flowers though he only possesses one single plant enjoys a real pleasure in the care and attention he bestows upon it—a pleasure which the very poorest may enjoy, even though shut up in the heart of a large city. It is principally for those who live in towns and large cities, who have no convenience for cultivating flowers but their windows that I write this little book. Therefore I will try to give as clear information on the cultivation of window plants as I can, using the simplest language, so that I may be understood by all ; and if what I say, should enable any one to grow his or her flowers to greater perfection and in larger variety, and induce those to grow a few flowers who never have done so before, I shall be amply repaid. But most of all would I hope to confer a benefit on the invalid whom God in his merciful visitation has deprived of the pleasure of enjoying the possession of a few plants except in the sickroom. To the invalid more than any one a flower is the messenger of joy, soothing the pain and loneliness of many a weary hour.

There is a great variety of flowers which can be grown to comparative perfection in a window, provided the window has a southern exposure, more or less, so that the plants may enjoy the benefit of the sunshine ;

#### 4      *The New Practical Window Gardener.*

and with the requisite attention to keep them clean, free from vermin and properly watered. All this I will try to explain in a simple and practical manner.

What a wonderful hold the floral beauties of nature have on the human heart! Go where you will in town or country, the love of flowers is displayed on every hand. It holds sway in the city from the button-hole bouquet to the great floral exhibitions; from the struggling geranium in the city alley to the gorgeous display in the parks and public gardens. In the country it is a poor cottage that has not its flower-plot or window plant. What a charming sight it is to pass through a country village where the queenly rose, the carnation, the pansy, geranium, fuchsia and a host of other favorites gladden the eyes with their well-known beauties. The general appearance of the outside of a cottage home may be always taken as pretty sure evidence of the character of its inmates. You can point out at once where the lover of flowers dwells. Every lover of flowers has of necessity a large heart capable of love and sympathy for all mankind; willing always to think the world very beautiful, and God ever bountiful, who gives all men the breath of life so that they can enjoy the beautiful works of His hand, and with full hearts to lift their thoughts in thanks and praise for His mercies, even though the troubles of life beset them at every step. I honour and admire the lovers of flowers, and would do all I could to encourage them. Often when I see the cottager spending his evening hour in his little garden and hear him eagerly tell me the history and peculiarities of this and that

favourite my hand fairly itches to give him the right hand of fellowship and bid him good-speed in his pleasant occupation. Honour be to those who thus feel the elevating influence of a lovely flower, and I am sure the flowers pay back tenfold interest for the attention bestowed on them by the pleasant feelings, hopes, and aspirations which they arouse within the heart.



**WIRE POT FOR FERNS AND LYCOPODIUMS.**

## CHAPTER II.

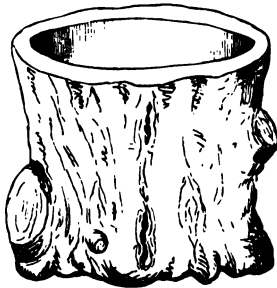
## SUITABLE POTS, VASES, AND HANGING-BASKETS.



ORNAMENTAL FLOWER-POT.

**N**OW, my dear readers, I will enter upon the practical details of my subject in earnest, and the first part I have to consider is the suitable kinds of flower-pots, pans, vases, hanging-

baskets, &c. The common earthenware flower-pots are sold by the "cast;" the number of pots in a cast varying according to their size, the price generally being three shillings per cast. The inside measurement of the rim is always taken. There are 60 two-inch wide pots in a cast, which are called "sixties;" 36 four-inch, 30 five-inch, 18 six-inch, 12 seven-inch, 8 eight-inch, and 6 nine-inch, which is the largest size you will ever require, though they run on to 1 sixteen-inch in the cast, which is the largest size made. Any



**RUSTIC POT FOR FERNS OR FLOWERING PLANTS.**

seedsman or nurseryman will supply you. Earthenware pans of various sizes are also used, and are better than pots for growing annuals, some kinds of low growing ferns, selaginellas, and for sowing seeds or rooting cuttings in. You should have one or two of them, as they are very useful, and for some purposes you will prefer them to pots. You should also have earthenware flats for standing pots in; they are far neater than plates or saucers, which are often used for the purpose, and are moderate in price.

But the flower-pot allows of a wide definition according to circumstances or necessity, for you will sometimes see fair specimen plants growing in an old teapot, jar, jug, or even, as I have seen, in an old tin can. I know an old woman at the present time who



ORNAMENTAL VASE WITH CACTUS AND SELAGINELLA.

has a pretty red China rose flourishing in an old tin can, and a small lemon plant growing in an old Coleman's mustard tin with the bullock's head on it entire. Well done, old lady, you deserve credit. Still regular pots are best, for they have a purpose-like appearance, though, as I have hinted, the want of pots

need not deter any one from growing window plants. All makeshifts, however, should have holes punched out in the bottoms for drainage.

It is very interesting to have a wire basket hanging from the centre of the window, with a saxifrage or the

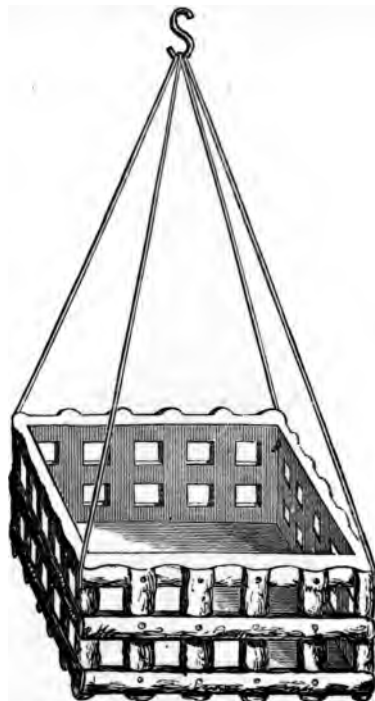


ORNAMENTAL WIRE BASKET.

Aaron's beard of the cottagers, ivy-leaved geranium, or any other hanging plant growing over it. A wire basket is easily made, and when tastefully arranged, is a very creditable thing to display; but you can purchase them of various designs and moderately cheap

10      *The New Practical Window Gardener.*

from any seedsman. The one figured on p. 9 is a very good example of a galvanised iron wire basket. Galvanised iron wire is the best material for your purpose; but you can also make very pretty ones with hazel



**EARTHENWARE HANGING BASKET.**

boughs, willows, knotty wood, virgin cork, or pine cones, which can be nailed on a wooden frame. When neatly made and varnished home-made rustic flower baskets look very pretty. Two or three plies of

small wire twined together in the form of a cord makes a very good suspender for a basket. Three, or at most four, of the twined wires, of sufficient length for the basket to hang down gracefully, joined together in a stout ring, and having small hooks to catch the

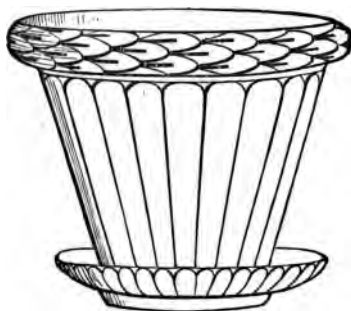


ORNAMENTAL VASE WITH LILY OF THE NILE AND SELAGINELLA.

basket, are quite enough. Earthenware baskets, as represented by the figure on p. 10, are excellent contrivances; in them the roots of the plant meet with a more genial material than wood or iron, and have also

12      *The New Practical Window Gardener.*

a neat rustic appearance. But of course your own taste will guide you in the construction or purchase of a hanging basket. An excellent substitute is a little square piece of wood with a hole in each corner, through which strings are drawn, knotted under the holes, and joined above to loop over the nail. This little platform will hold a pot and saucer nicely, and when the plant has grown a little, will be a great ornament to your window. An enamelled tile with a



ORNAMENTAL FLOWER-POT AND FLAT.

hole drilled in each corner answers the same purpose, and looks neater. This is the cottager's favourite way of suspending a plant in a window, but I dare say you will find wire answer the purpose better than twine.

Nothing looks so handsome as a small terra-cotta or Etruscan pot or vase, with a nice plant in it standing in your parlour. Illustrations of different styles are given in this chapter. You should by all means have one or two if you can afford it. They are high in price, ranging from two shillings and sixpence and upwards. Many

people cannot afford ornamental pots or vases at those prices, and regret the want of them, for they are really handsome ornaments. I need scarcely say anything to you about cut-flower vases. There are few homes without a small vase or two for holding cut flowers. They are so easily obtained that it is a pity to see a lovely bouquet stuck into a mug or tea-cup for want of one. Cut-flower vases of glass are now greatly used in dinner-table and drawing-room decorations. They are generally trumpet-shaped, and made in many



different styles. The common trumpet glasses are very useful for cut flowers on any occasion. Hyacinth glasses are elegant ornaments when filled with nicely grown hyacinth bulbs in flower. The common glass ones are very cheap; a more elegant and expensive style has lately come into great repute made of coloured glass or Etruscan ware. You will find it very interesting to grow, perhaps, a couple of hyacinths in glasses. Plants in a room should have ornamental covers for the pots; you can purchase expansive

14      *The New Practical Window Gardener.*

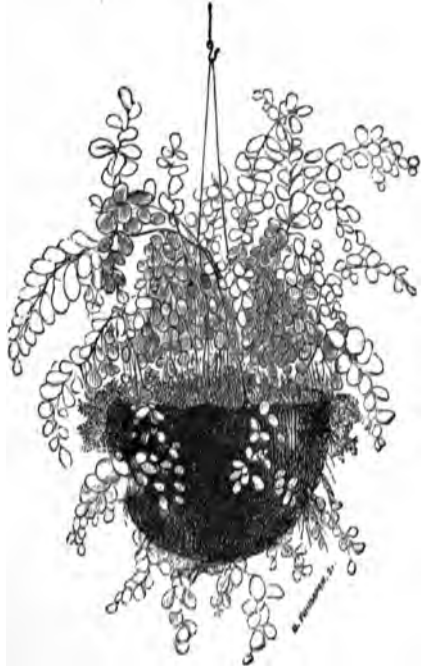
wooden ones from the seedsman. They are very pretty, and hide the unsightliness of a common pot from view in the favoured domain of your parlour. You can obtain them either plain, coloured, or gilded; and they will expand to suit the size of any pot, or fold up into



ORNAMENTAL VASE WITH AMARYLLIS AND SELAGINELLA.

small compass when not in use. You can also obtain an improved form, ornamented with imitation foliage. They are all very durable and moderate in price. A very pretty and serviceable pot cover could be made with card-board, which you could ornament to your

taste. A card-board pot cover when ornamented with sea-weed and shells looks extremely pretty.



## CHAPTER III.

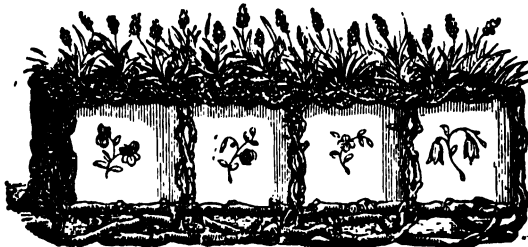
## THE WINDOW BOX.

**I**N this chapter I shall consider the construction and arrangement of the window box, which of itself has become quite an institution in the land. It is in reality the real window garden, beautifying our windows with its miniature flower border, in which, by judicious management, the revolving seasons of the year can be marked by a selection of their choicest flowers. Spring comes in with its hyacinths, tulips, crocuses, snowdrops, wall-flowers, arabis, daisies, pansies, and other welcome beauties; summer with its geraniums, fuschias, calceolarias, lobelias, pansies, and a host of favourites; while autumn brings the addition of stocks, asters, chrysanthemums, and others; and winter even, with its frost and snow and dull flowerless months, completes the circle with a few branches of variegated shrubs and holly-berries tastefully arranged, giving the window a bright appearance for the season. All this is easily done, and within the reach of most people. A few shillings laid out on this innocent pleasure is money well spent indeed, returning tenfold interest for the outlay in the pleasure you enjoy through your lovely

flowers and the cheerful appearance they give to your dwelling.

How delightful and interesting to the eye is a well filled window box! What a cheerful aspect it gives to a street or square in a city or town where every other window is gay with miniature flower gardens. Many are the loving looks cast upon them by the passers by, who admire them at a distance, envious of the favoured ones who have the delightful pleasure of attending to them.

It is a treat at almost any time of the year to pass along some of the streets and squares of London where



BUSTIC WINDOW BOX WITH ENAMELLED TILES.

window gardening is carried on to some extent. There it is evident window gardening has become an institution, for it is quite a common thing to see the façades, windows, balconies, and areas of the houses gay with the richest verdure and glowing with all the colours of the rainbow, causing one to wonder that people who see it do not go and do likewise so far as their circumstances will permit; and I am sure window gardening in our towns and cities could be carried on to a far

greater extent than it is at present. I hold that every person who has a flower in his window confers a benefit on the town at large, for it helps to brighten up the dulness of the street, and imparts an air of cheerfulness and content to his own dwelling.

Window boxes are made and sold in various styles of workmanship and material, and any respectable seedsman will supply you. Enamelled tile boxes range from six shillings and sixpence per running foot and upwards; they are expensive to buy. You could make nice ones of wood yourself, or you might get a

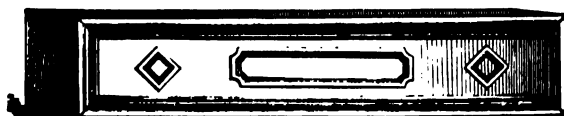


WINDOW BOX WITH ENAMELLED TILES.

carpenter friend to make one for you. Virgin cork is an excellent material for the rustic style of boxes, which you can purchase at fourpence per pound. On this and the preceding page illustrations are given of the best styles of ornamental flower boxes now used for window and balcony gardening, which are made by Messrs. Barr and Sugden, of King Street, Covent Garden, London.

I will now describe to you how to make a wooden one at very little cost and with little trouble, which will answer the purpose as well as the best made. It

should be about eight inches wide by ten inches deep, inside measurement, to allow two inches at the bottom for drainage and one inch on the surface for watering. This prevents the soil from being washed over the sides of the box and dirtying the paint or tile, which looks bad. There will be seven inches left for soil for the roots to spread about in; quite a sufficient depth, if good rich soil is used, such as is recommended in another chapter for pot plants. A pinch or two of guano or dissolved bones may be added and incorporated well with the soil. The length of your box should be according to the breadth of your window, leaving it easy so as to be handily taken inside at any time. The sides should be of three-quarter inch deal,



and as it is best to nail the ends between the sides, the ends should be of one inch deal and the bottom of the same thickness. Wood of those thicknesses makes an excellent box. Larch is the best kind of pine for the purpose, but a box made of oak lasts very much longer than one made from any other kind of wood.

I will not limit the size of the box, as circumstances must decide that point, but for any ordinary window the one I have described will answer best.

The outside of the box should now have three coats of paint. Green is the best colour, being nature's own

choosing, and it accords best with the flowers when growing in it. You can have it nicely done in imitation stone-work by painting it of a stone colour and while the paint is wet dusting it over with silver sand. Taste must guide you in the decoration afterwards; all lines, however, must be drawn quite straight and the parts of designs well balanced, so that there be nothing ill drawn to mar the beauty of the flowers, for a neat, clean, well painted box adds greatly to the effect, and is always a credit to the person interested. Never paint the inside of a box, for plants do not like paint.

I have seen people make nice little wooden boxes much in the shape of a pot but square, which looked very neat and answered the purpose well. A little taste can be displayed in ornamenting them.

I must particularly tell you that the window box should be raised up a little from the window sill for the sake of drainage, and to keep the woodwork from spoiling in any way. The best plan is to have iron rests fastened firmly to the window sill to stand the box on, with a catch at the ends to prevent the box from being toppled over at any time by accident. You must also see that the box has proper means for drainage; five or six holes should be bored through the bottom.

If you have not an auger to bore holes with, the kitchen poker heated red-hot will answer admirably. The holes should be about an inch in diameter. If the bottom of the box were made in two pieces and an open slit one quarter of an inch wide left between them it would answer the purpose well. A window box made of lead or sheet iron though more expensive at

first will out-last a dozen wooden ones. I once saw an excellent contrivance for window plants in pots, or to have them planted out. The contriver was a tailor by trade, and a man extremely fond of flowers. Outside the window where he sat at his work he had contrived to arrange quite a little flower garden of a most interesting description. He had two iron brackets fixed below the window, and a zinc box placed on them full a yard wide, the sides being nearly a foot high; this he filled with good soil, after providing ample drainage, and there all the season through he kept up quite a grand display of flowers. I often admired his window box and the good taste he displayed in arranging it. In the spring it was quite a treat to see his box when his bulbs were in bloom. He was a happy little man, and a true lover of flowers. I often think of him with his little garden and reflect how much people could do in that way if they would only try, or could have seen the splendid example of my tailor friend.



## CHAPTER IV.

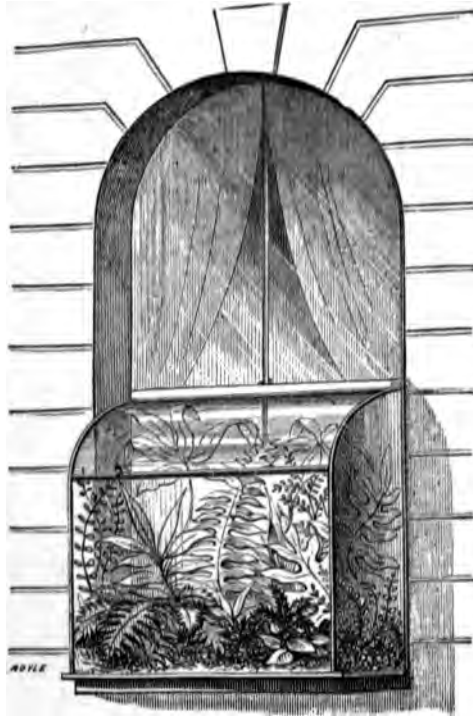
### THE WINDOW GREENHOUSE.

HE Miniature Window Greenhouse, which I will now consider, is scarcely fitted for the centre of large towns, but answers well in suburban districts and country towns. The window greenhouse is a thing of far greater pretensions than the window box. It is an ambitious step towards its great progenitor, the Conservatory, and an object which all lovers of flowers, who take a pride in their window boxes, must long to possess. And why should they not possess it? It is but the question of a few shillings if they have the ingenuity to make one themselves, or can get a carpenter friend to construct it for them.

The window greenhouse is the climax of window gardening, the "beau ideal" of window gardeners, enabling them to grow a greater variety of plants, and to get up good specimens for exhibition. But apart from that it is a great ornament to a room. What a world of interest is centred around it. Visitors are loud in their admiration of it; every body compliments you on your happy invention and the beauty of your flowers. To children it is a treat of surpassing interest.

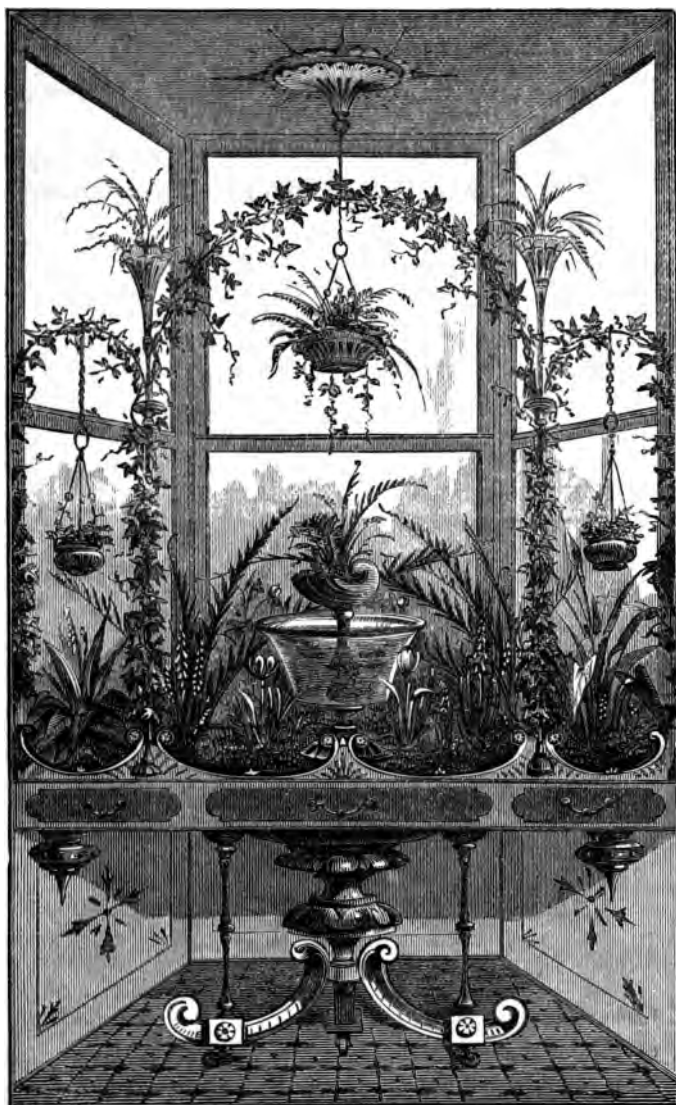
They carry away remembrances of it which they never will forget.

But the great event of the season, "THE FLOWER SHOW," is drawing near. You have been looking



ORNAMENTAL FERN-CASE OUTSIDE WINDOW.

forward to it for months past. You have been dreaming of this or that plant as being the future prize winner. Now you water and tend them with redoubled interest.



**ARRANGEMENT OF PLANTS AND HANGING BASKETS IN WINDOW.**

Day by day you have marked the progress they have made towards the state of perfection you wish them to reach. At last you have reared them into fair exhibition specimens, and, on the morning of the great day you stage them on the exhibition table amongst your neighbours' plants with nervous feelings of anxiety. But luck is on your side, the prize tickets decorate your favorites, and they stand proudly amongst the others, reflecting credit on your skill as a plantsman and making your heart bound with pleasure when you see them taking the place you had long hoped they would. You feel an honest pride in pointing out to your friends and acquaintances the prize winners of the day. Ah! then you think there is nothing so interesting as your little greenhouse, and you work at it again with renewed interest, determined to keep up the name you have won, dreaming dreams of future success in the prize list, if all goes well, till the next flower show.

The fact is every one in a country town or suburban district, with a love for flowers, should get a miniature window greenhouse. If you once have one, and be able to grow your plants well it will become a necessity of your life and you will be surprised at the interest you take in every plant within it.

I will now try to direct you as simply as I can how to construct one for yourself. You must first get a blacksmith to fix you up a pair of iron brackets below your window. They should project out two feet at least; you must get them securely fixed, as the greater part of the weight of your little greenhouse will lie on

26      *The New Practical Window Gardener.*

them. Then you must fix a narrow three quarter inch board up each side of the window, with a cross board above to tighten it, and have all close fitted and fixed



with a few nails to the crevices of the stones. This frame is to secure the greenhouse and to prevent it

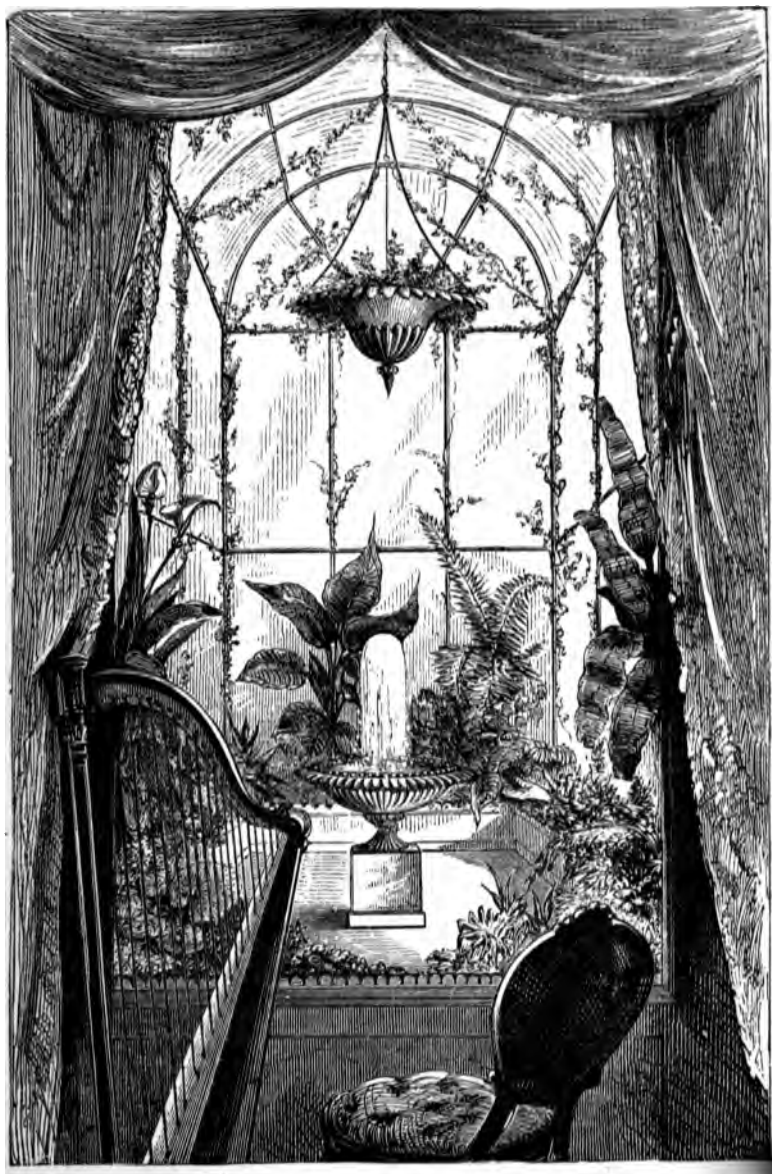
from interfering with the window's movements—the ventilation of the greenhouse being independent of the window. For any ordinary window the greenhouse



ORNAMENTAL PLANT CASE AND AQUARIUM COMBINED  
OUTSIDE WINDOW.

may be of the following dimensions :—Three feet high, two and a half feet wide, and two feet front elevation, the length being according to the breadth of the window ;

at least six inches all round should be of wood to give small cuttings or seedpots some protection from the sun. There should be at least two astragals down the roof, front, and sides, as it is not so costly if a small pane is broken as if it were a big one. It should be glazed with 21 oz. glass, that is 21 oz. to the lb., and have three coats of paint. White or light stone colour is best. The six inch board all round may be painted green or in imitation of brickwork, according to your taste. The bottom should be of good strong deal or sheet iron, with several holes bored through it to drain off the surplus water, and an inch of fine gravel should always cover it, as the plants will be greatly benefited by the bottom of the pots standing on a moist surface. The bottom should be screwed to the iron brackets and the sides fitted in and screwed to the upright bars at the sides, leaving the window free, so that its opening or shutting may not be interfered with. The board at the front should be hung on hinges, so that it may be pushed open a little on warm summer days for ventilation. And a ventilating board six inches wide should be fixed on hinges at the top next the window so that it may be easily opened at any time. This ventilating sash may be of wood, but it will be far neater if it be a glass frame, and would not intercept the view in any way. A neat little roller and blind should be fixed immediately under the ventilating sash at the top to shade the plants when the sun is strong. It must be made to come down close under the roof; a tight cord down each side will work it well if a little pulley be fixed to the



**ARRANGEMENT OF PLANTS AND FOUNTAIN IN WINDOW.**

front and a cord run over it from the centre of the blind. You will soon see the benefit this will be to your plants. It keeps the hot sun from scorching them up and drying their tender roots by heating the pot which would soon tell on their health. Shade from the sun when it is hot gives your plants a green healthy appearance and keeps them longer in bloom.

The miniature greenhouse I have attempted to describe to you is a very good size for an ordinary window; though it may reach high it cannot darken your room. Besides, the plants will form a natural blind far superior to anything else, and will always be a pleasure whenever the eye turns on them, while the fragrance and beauty of the flowers may at all times be enjoyed, though the inmate of the room be an invalid, who, more than any one, will appreciate and enjoy a window greenhouse. To such a one the sweet smell and sight of flowers would be an immense benefit, sometimes doing more real good than all the doctor's drugs.

Window greenhouses, fern cases, and aquariums, in a great variety of styles, are sold by the principal seedsmen in London and most large towns. They all range from £5 and upwards, and are excellent in their way; but their price puts them out of the reach of most people. You can easily construct your own by following the directions I have given, and I would strongly advise all who can to try. You will find it a real pleasure if once in working order. On pp. 23 and 27 are illustrations of plant cases for the outside of windows, very often met with in London and other towns. They are extremely elegant contrivances, and are very

pretty when filled with ferns and other plants. But the very height of refinement and elegance in window gardening is represented on pp. 24, 26, and 29. Bow or French windows are especially adapted for carrying out this arrangement ; and, where cost is a secondary consideration, a very picture of beauty and elegance can be carried out, to the beautifying of your home, the credit of yourself, and the admiration and delight of all your friends and acquaintances. It can also be carried out on a smaller scale in any window having a recess ; and I am sure many little contrivances in this way will suggest themselves to your mind if you once apply yourself to the subject.



## CHAPTER V.

### SOIL AND DRAINAGE.



**E** must now consider the suitable kinds of soil required, and the proper drainage for a pot before the plant is put in it.

A very accommodating mixture suitable for nearly all kinds of plants in pots is composed of one part of turfy loam, one part of leaf mould, and barely one part of silver sand, with one half part of dry cow-dung, rubbed down fine, added. The cow-dung gives a robust healthy constitution to soft-wooded plants, such as geraniums, fuchsias, cinerarias, calceolarias, and many others. The manure should be left out, however, in potting ferns, mosses, the cactus tribe, and all peat-loving plants in general, which should have one part of nice fibry peat added instead. For quick growing soft-wooded plants a pinch or two of ground bones may be added with advantage. Any nurseryman will supply you with as much mixed soil for a few pence as would fill a dozen pots, or if you have a gardener friend he will see you put right. When ordering soil for potting from a nurseryman state the kind of plants you intend potting and he will give you soil accordingly. When potting peat-loving plants,



WINDOW GARDEN INTERIOR.



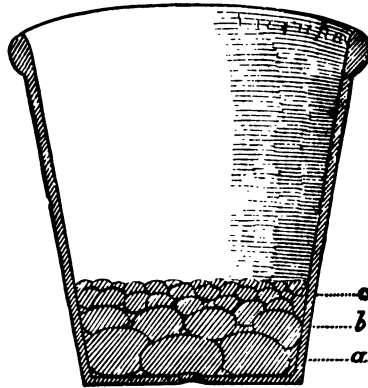
such as heaths, no turfy loam is required, but peat earth, leaf-mould and a liberal supply of silver sand. The cactus tribe are always benefited by a quantity of small-broken brick being added.

You should never use common garden soil in potting plants, for it is always too finely pulverised, and greatly deficient in the natural food required by a healthy pot-plant. By being potted in such soil, the ball of the plant by frequent watering becomes a close sodden mass, through which the roots are very unwilling to penetrate; when this takes place the roots begin to decay, and the plant falls into a state of premature decline. The kind of soil you require is an open fibry compost through which the air can penetrate, and the water pass freely away, enabling the roots to extract the essential gases so necessary to the life of the plant. Turfy loam or peat earth, according to the class of plants you intend to pot, should therefore be the principal part of your compost. Turfy loam is the turf cut from good old pasture to the depth of four or five inches, selected as fibry as you can get it, and laid up for six months or so in a heap to rot. Peat earth is the turf cut from a selected part of heathy common, having plenty of fibry matter, with a sprinkling of sharp silver sand running through it, and laid up also to rot before using. When you prepare your turf for potting, chop it up small with a chopper or spade, but never sift it, for the turfy matter gradually decomposing in the pot affords the most natural food required for the health and well-being of your plants. Leaf mould is formed from the leaves of autumn

gathered together and stored away in a heap to rot. They require to be turned over in the heap several times during the year to hasten their decay. They are fit for use after having lain one year or more. Before using leaf-mould pass it through a sieve to remove all stones, sticks, and other rubbish gathered with the leaves. Silver sand is the best sand to use, but when not obtainable, river or pit sand, if pretty sharp, will do very well instead. You must never use sea sand because of the salt it contains, which would very likely kill your plants. In making up your compost, carefully keep out all worms and pieces of wood. Pieces of wood and beech-mast often cause a white fungus to germinate among the roots, throwing the plant into an unhealthy state.

The soil being now ready we will turn our attention to one of the most important things to be considered in potting plants, that is, free drainage; this is absolutely necessary for their health and well-being. If the drainage is bad, and the crock-hole gets choked up, the surplus water does not run off, but lodges in the ball, which soon gets soured and sodden, rotting the roots and throwing the poor plant into an unhealthy state, and then it leads a miserable life till its owner gets tired of it and throws it away, or allows it to die a wretched death of itself. Many a plant is destroyed through neglecting this apparently simple thing, which would have been a credit to its owner had it been properly drained. To prevent you falling into this easy mistake, I will try to tell you how to give your plants proper drainage.

For ordinary greenhouse plants, in six- or seven-inch pots, place one large crock—that is, broken pot—the concave side undermost over the crock-hole in the bottom; put neatly over that again three or four smaller pieces; then a quantity of small broken crock, covering all with a little moss or the roughest of your compost to prevent the soil from being washed down into the drainage. For smaller, three- or four-



*a, b, c,* are three layers of crocks or potsherds; the largest at the bottom, the smallest at the top.

inch pots, one crock and a little moss is sufficient. Larger pots will require more drainage, while for ferns and cacti nearly one third of the pot should be drainage. An oyster shell is a capital thing for the main drainage crock. This is what may be called proper drainage. Too little is bad, while too much is needless, as it only

takes up room in a pot which should be occupied with food for the roots.

Drainage will get choked up sometimes. One great cause of this is earth-worms, which must be hunted for as soon as you perceive traces of them. You will soon know if a worm is present in the soil by its casts upon the surface. If you have a suspicion that there is a worm present, turn out the ball of the plant and search for it. The proper way to do this is to take the neck of the plant between the fore and middle fingers of the left hand, placing the bottom of the pot in the right, then turn it over and give the rim of the pot a rap or two on the table and the ball will loosen freely. Take the pot gently off with the right hand, taking care not to disturb the drainage, and you will see at once by the appearance of the ball if a worm is there, as if so the runs or channels will be traceable all round, and most likely you will find the rascal lying lengthways in one of them. It is sometimes difficult to get the worm out, for it disappears from view if not taken firm hold of quickly. In replacing the pot on the ball do not disturb the drainage. A smart dump or two on the table will settle the plant into its old position.

To water with soap-suds is another way of catching them, and also water that a few pieces of lime have been slacked in. This makes them rise to the surface, and then they are easily caught.

Worms are a great nuisance in a flower-pot, for they not only feed on the strength of the soil, but they also break numbers of small fibrous roots and make the ball loose and broken, all which evils very soon tell

on the health of the poor plant. In order to prevent this, worms should be carefully looked for before the soil is used; but even after that they may appear, for very small ones and eggs will escape notice.

In giving drainage to window boxes you must proceed much in the same way as for pots, covering each hole with a large crock, and an inch or more of broken tile or crocks over it, the whole being covered with a little sphagnum moss to keep the drainage clean.

There are many different kinds of manures and fertilisers used for pot plants. The most easily come at sometimes are a few sheep droppings or dry cow-dung; but the best for mixing with the soil is bone-meal or bones ground down, mixed with a very small quantity of lime. For top dressing or mixing in the water a thimbleful of guano is very good. But I think you will find 'Standen's Gardener and Amateur's Friend' preferable to any other fertiliser. It is sold by all seedsmen and nurserymen in canisters, with full directions how to apply it. Liquid ammonia is an excellent fertiliser, ten drops to a quart of water being sufficient. It is very easily applied and no dirt attending it. A very safe liquid manure is made with sheep-droppings dissolved in water, not too strong, just sufficient to give the water a dark brown appearance. Tobacco-water is also a good manure, and so is very weak glue-water. Manures applied to the soil should be well incorporated with the mass by frequent turning. Liquid manure should be applied as often as twice a week, or once a week at any rate.

## CHAPTER VI.

## POTTING AND WATERING.



We will now proceed to consider the very important operations of potting and watering. Watering, especially, is the very life and mainstay of a plant. To know when and how to water is one, if not the greatest, secret of good plant cultivation. I hope to make you understand this before I have done. One important consideration in potting is to have your soil in a proper state, neither too wet nor yet too dry—just a medium state between. If too wet the soil bakes hard together and the roots have no free action; if nearly dust dry you cannot have the ball of the proper firmness all through, and watering at first is very difficult.

You should have the pots clean, inside and out, before you begin to pot. If the pot has been in use before, the remains of its former occupant may not suit the taste of the new one. It is a general saying with gardeners, "One plant's food is another plant's poison." The roots of a plant always seek the outside of the ball, forming a dense network all round the inside of the pot; any deleterious matter would thus be sure to

tell on the health of the plant, which will not be the case if the pot is washed before using.

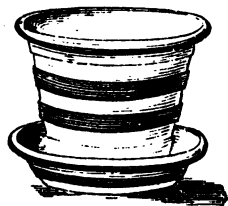
After giving the pot what you consider proper drainage, put in a little soil, then take the plant by the neck with your hand, let the roots hang loosely in the pot, keep the neck of the plant fair in the centre, and with the other hand heap up the soil loosely in the pot. Bump it down smartly several times, pressing home the soil with the thumbs at the same time. This ensures the ball of the plant being of the same firmness throughout. In shifting an established plant into a larger pot, proceed in the same way, keeping the plant in the centre and the surface of the ball a little below the level of the pot, taking care that all round the sides is properly filled in, no vacancies being left; a moderate ramming down with a stick will ensure this being done. Always leave room for watering; and with a settling bump or two to the pot, the potting is completed.

After potting, water with a fine rose, if you have one, if not, pour the water on gently, but do not by any means give too much at first. Just give enough to settle the soil, and let it rest for some hours before you give any more. Giving too much, or, as I may say, soaking the ball at first, does the plant harm, as it makes the ball like a puddle. A little at first settles the soil, and when you water again, the water percolates freely through the ball and drains away at once.

In shifting a plant into a larger sized pot, the proper rule is to select a pot in which the one you are to shift from can stand easily. A rooted cutting should only

have a three- or four-inch pot at first, and be shifted into a larger when the pot is full of roots. I would not recommend you to grow plants in any larger size than an eight-inch pot. Six- or seven-inch is the most convenient size for window plants. If plants such as fuchsias or geraniums have outgrown the eight-inch size, it is best to cut them back and reduce the ball so as to allow room for fresh soil in the same pot. Cape geraniums—those with the large partly-coloured flowers—should always be cut back after flowering to the second eye on each branch, and potted back into a smaller pot, from which they can be shifted into the larger size again in the early spring after they have made some growth.

Window plants should always stand in flats to keep the window dry. The water which settles down into the flats after watering should always be thrown out, as it is injurious to the plants to let it remain, tending



to rot the roots by keeping the ball too moist and preventing the action of drainage. The proper time and way to water plants is very little understood by some people. Through excess of kindness they make a point of watering their plants at stated times without

considering whether it is required or not, and often the poor plants are killed through this excess of attention. Let me tell you that too frequent watering is most injurious. To avoid this evil it is necessary to have a rule to guide you. Well, then, never water plants unless they really require it; you will soon learn to know by experience when they do want watering. A good rule to know the proper time by is when the surface of the ball looks dryish. But an unfailing guide is to rap the side of the pot with your knuckles; if it gives out a ringing sound the plant is dry, and you should water immediately, but if the sound is dull and solid, then no watering is required. To learn the distinction between the two sounds fill two pots with soil, one dry and the other damp; water the damp one, and you will learn at once, by rapping them, the difference in the sound which they give out.

The roots of plants have a very limited range in flower-pots, so particular attention should be paid that they do not get too dry; and when you do water give sufficient to soak the ball thoroughly, and then withhold it till required again. A little water on the surface is almost useless. In winter plants need watering very seldom, as they naturally sink into a state of rest during that season. In the summer season they will require water very often—every day, in fact, if the weather is warm. The best time to water in the summer is the evening, for during the night the plants get refreshed and enjoy the benefit of the watering before the sun rises on them again. As watering is the very life of the plant you should now and then put

a little guano into the water, but be very careful not to give too much, as it may burn the roots; a thimbleful to a quart of water is quite sufficient, and twice a week often enough during the season. A very safe and cool liquid manure may be made by sheep-droppings dissolved in water; just enough to give it a dark appearance—not muddy. This is a safe and capital liquid manure for plants. Liquid manure should not be given oftener than twice a week.

The extremities of the fibrous roots act as so many mouths, extracting all the food contained in the water; the water at the same time converting the nourishing matters contained in the soil into a fit state for absorption by the many little mouths into the body of the plant, passing into and creating beautiful foliage and blossom in endless variety to delight our eyes. And so on goes nature—the mother of change—in her ceaseless round of absorption and creation, filling the contemplative mind with wonder and awe at the mighty power present in its hidden workings.

In filling window boxes with soil after the drainage is in, the box should be heaped up at once, and the whole shaken down and pressed together, so that the soil may be of the same firmness throughout, care being taken to press it well into the corners. Every morning and evening your plants should be sprinkled overhead to keep dust off them and induce a robust, healthy vigour in their growth.

Rain water is the best for watering all kinds of plants. It is nature's own providing, and contains far more nourishment than hard water. Always use rain

water if you can get it ; if not, put a little bit of soda into the hard water and let it stand in the sun some time to soften. You should never water your plants with water below the temperature of your room. To give plants colder water than the air they live in chills their roots and checks their action, which is a thing you must guard against. Therefore if the water is coldish when you wish to use it, add a little boiling water to take the chill off ; sixty-five or seventy degrees is the proper temperature for watering with. The surface of the ball, every now and then, should be pricked over with a pointed stick to allow the water to percolate freely through the whole ball, for when the surface is hard the water mostly runs down between the pot and the ball, and the heart of the ball is often left dry when you think the plant has been properly watered. The plant by that state of matters leads a life of semi-starvation ; besides, when the surface of the ball is caked the air does not get free passage to the roots, telling greatly against their healthy action.

Now, dear readers, here we have arrived at an advanced stage of our window gardening. We now have our plants potted, watered, and placed in their positions, where we expect to enjoy all the beauty and grace of the floral display we have been labouring for ; hour by hour and day by day they grow and bloom, yielding an amount of pleasure, interest, and affection which we never imagined window flowers to have the power of arousing, till we took their cultivation under our care. Now we feel it to be really a labour of love when we spend a few spare minutes attending to their wants.

## CHAPTER VII.

## FILLING WINDOW BOXES.

N planting window boxes you can have a wonderful variety in plants and general arrangement, and there is great scope for a display of neatness and taste. The box itself may be scalloped, beaded, carved, or plain; painted, varnished, and decorated in any style; made of wood, slate, tile, or virgin cork, or other materials. And as every season comes round you can have your window box striking the yearly quarters as true as any calendar, as one season's flowers die out and another comes in, keeping up the interest all the year round, and forming a never-failing source of pleasure.

In this chapter I propose to fill an imaginary dozen or so of boxes to give you an idea how it may be done.

I will take them as they bloom in their seasons, from the early tulips and snowdrops of spring to the chrysanthemum and variegated shrubs and holly berries of winter.

*Box 1st.*—Early Duc-van-Thol Tulips, and two or three roots of Golden Feather in the centre. Snowdrops, yellow, white, and blue Crocus round the outside.

*Box 2nd.*—Early Duc-van-Thol Tulips, early Hyacinths, Arabis and Aubretia inside; with mixed Crocuses outside and clump of Double Snowdrops at each end.

*Box 3rd.*—Late Tulips, Hyacinths, and Crocuses, double and single Primroses and Polyanthus inside; Sweet Violets and Hepaticas round the outside.

*Box 4th.*—Dwarf Wallflower, Brompton Stocks, Polyanthus and Narcissus inside. Red and white Daisies, blue and yellow Pansies round the outside.

*Box 5th.*—Dwarf Wallflower, Brompton Stocks, and Lily of the Valley. Red and white Daisies and blue Pansies round the outside.

*Box 6th.*—Variegated and Scarlet Geraniums, brown and yellow Calceolarias; with blue and white Violas and Pansies and Echevarias round. Sow sweet Peas at each end to train up.

*Box 7th.*—Geraniums and Pelargoniums, with little patches of annuals between, such as Candytuft, Nemophilla, Clarkia and Mignonette; with blue Lobelia, Sedums and Echevarias round. Canary creeper, Nasturtium and Sweet Peas, to train up the window.

*Box 8th.*—Scarlet and white Geraniums, brown and yellow Calceolarias alternately; blue and white Lobelia round; with Canary creeper and Nasturtium at each end.

*Box 9th.*—Geraniums, Calceolarias, and Fuchsias, with Musk plant and Lobelia round; a few Virginian Stocks between; and Scarlet-runners to train up at each end.

*Box 10th.*—Scarlet Geraniums, with Lobelia ; blue and yellow Violas and white Pansies round ; Canary creeper trained as an arch over from end to end. Scarlet Nasturtiums trained up the window.

*Box 11th.*—Geraniums, Heliotropes, Calceolarias, and Fuchsias ; Mignonette, Musk, Lobelia, and Echevarias round ; Sweet Peas and Convolvulus trained up the window.

*Box 12th.*—Stocks, Asters, and Geraniums ; with Lobelia and Mignonette round.

*Box 13th.*—Stocks, Asters, Chrysanthemums and Mignonette ; with Echevarias and blue and yellow Violas round.

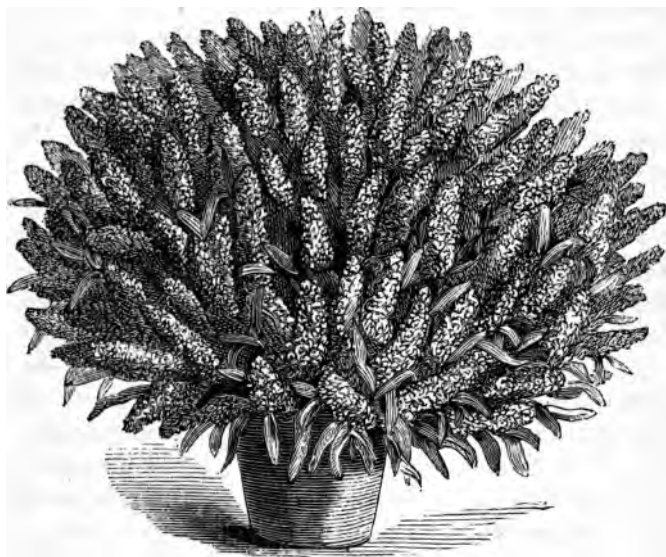
*Box 14th.*—Green and variegated twigs of Shrubs, such as Ivy, Hollies with berries, Acuba, Laurels, Box, &c., with cut Chrysanthemums in vials of water intermixed, to be renewed as they fade during winter.

I have thus filled a few imaginary window boxes arranged according to the flowering season of each class of plants. The examples I have given will help you in your selection of plants, and give you an idea how to arrange them tastefully and to the best advantage. Of course, circumstances must rule your selection of plants to a great extent. Every one cannot afford to keep up such a selection of plants as I have enumerated. Still it is wonderful what you could purchase for a few shillings in Covent Garden Market, during the season. And by replacing faded and out-blown flowers with fresh plants now and then, and adding fresh soil occasionally, one box can hold all or

nearly all the passing seasons display. Directly your Autumn flowers are out of bloom you should refill your box with fresh soil, and plant your Spring flowering Bulbs, such as Tulips, Hyacinths, Crocuses, Snowdrops, &c. October and the first half of November is the best time for planting them, and two inches below the surface is the proper depth. Mice are very fond of these bulbs, so you must take care that they do not get at them. The best way to do this is to cover the box with something. Bulbs spring best in the dark, so you should keep the box in a closet or anywhere from the light till they have sprung up about an inch or so. After planting give them a moderately good watering.

You can have very pretty flower boxes by filling them entirely with annuals, such as Red and White Candytuft, Clarkia, Nemophila, Larkspur, Musk, Mignonette, Virginian Stock, and many others. They make a gorgeous display of bloom for a few weeks. Mignonette especially is a favourite with every one, for its delicate little flowers and exquisite fragrance—really “a little darling,” true to its name. A box of annuals should be sown about the end of February, in small patches or lines, as you may wish them arranged. Flower seeds vary much in size from the big Scarlet Runner to the very small Clarkia, and you must cover them accordingly. Scarlet Runners, Nasturtiums, and Sweet Peas may be covered half-an-inch; Clarkia and Mignonette hardly covered. When the seedlings are up you will have to thin them out as they grow; thin them out well, leaving only four or five plants in each patch. If left too thick you will have poor bloom and

a wilderness of weak plants ; while if properly thinned, you will have nice strong plants and a fine display of flowers. Annual boxes soon get weedy looking, and to make them last as long as possible in flower requires a good deal of attention in picking out fading plants and dead flowers.



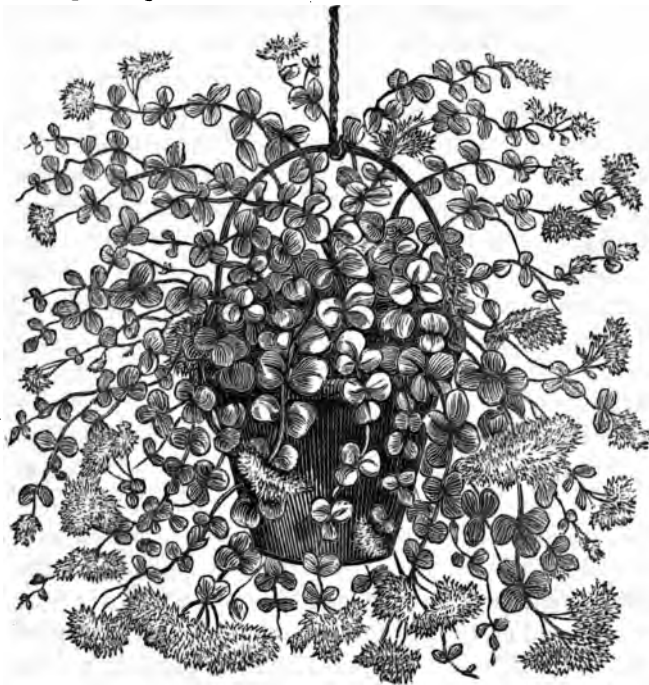
**BUSH MIGNONETTE.**

As the Spring advances and risk from frost becomes less, your window boxes will begin to receive their summer occupants ; then what a wonderful display you may have. The gay golden Canary Creeper, Nasturtiums Scarlet Runners, &c., will convert your windows into a

veritable garden bower, while your boxes blaze like a jewelled coronet. Creeping plants can be trained all round the window by having small twine led round for them to cling to. A few small nails in the crevices of the stones and the twine twisted round them will do this. Your boxes will require regular attention with water in the summer time, but you should not water your box overhead as watering thus spoils the bloom. When the plants are dirty you will have to sponge the dust off leaf by leaf. Take care to have all dead leaves and blooms cleaned away and nothing left to cause any unsightliness. Thin and prune to keep the plants from overcrowding too much. What beautiful specimens of window boxes one sees in unexpected places sometimes. I happened on several occasions to be in a small manufacturing town some time ago, and nothing gave me so much pleasure as a box of flowers in one of the windows of a large factory; it was so tastefully arranged and so gay that I could not but admire it. As far as I recollect now it was a green painted box filled with Scarlet and White Geraniums and Yellow Calceolarias mixed, bordered with Musk plant and Lobelias. What gave the crowning effect, however, was an arch thrown over from end to end of the box and a Canary Creeper wreathed round it. I used to think it like some gigantic golden crown sparkling with gems. Whoever arranged it had good taste.

Now, supposing you have got your window box in beautiful array, and the graceful creepers twining bowerlike around the window, what would be prettier than a neat wire basket hanging from the centre, with

a creeper twining round the wire work and hanging down in little festoons of flower and foliage ; a bright Scarlet Geranium and a plant or two of Blue Lobelia filling it up within ? Such a window would create



**SEDUM SIEBOLDI.**

quite a sensation in the neighbourhood. A strong hook for the basket to hang from driven in above the lintel would hold it up. To prevent the wind from blowing it against the window it need not hang far down, or

better still a wire may be stretched across from side to side of the window to fasten the basket to and hold it steady. And to go a little farther still, if you live in a cottage, or on the ground flat of a house why should you not have a tasteful little rockery built up to your window sill, so that your window box may act as the crowning point of it? Thus you could have Ferns, Mosses, Rock and Alpine plants growing in conjunction with your window display; the whole forming a combination of flower and foliage that would be the admiration of every one who had the pleasure of seeing it, and reflecting at the same time no small amount of credit on yourself.

You will find the window boxes always one of the richest treats in London. Some of the houses at the west end are veritable gardens, every window being full of lovely flowers. There you can study the tasteful arranging of a window box in the highest style of the art. No lover of flowers can pass through such streets without being pleased and delighted, or leave them without bringing away a serviceable hint stored up for future use.



## CHAPTER VIII.

ON PLANTS IN OUR DWELLINGS; ARE THEY BENEFICIAL  
OR NOT ?

WE have now a very important question to consider, that is, whether it is beneficial, wholesome or otherwise, to have flowers in our dwellings? I have heard it said by people who pretended to know that you should not have flowers in your house at all, as it is greatly against the health of the inmates, because the noxious gases they give out have a baneful effect on the air, especially if they are in the sleeping apartments. I hope to be able to show you that such an idea is to a great extent chimerical.

All plants absorb through their leaves carbonic acid gas from the air around them. Now this carbonic acid gas is composed of carbon and oxygen. During the hours of daylight the plant retains the carbon and releases the oxygen,—giving it out to the air again.—Now with us and all animal life this order of things is reversed, for we retain the oxygen and give out the carbon. Therefore, during the hours of daylight the oxygen without which we could not live is given out by the plants, while they retain the carbon which affords them nourishment, while it would kill us if we breathed

it. During the day however dead leaves and diseased parts of plants and also the flowers give out a small portion of carbon, but it has no effect on the air if the plants are kept free of dead leaves and decaying parts; the great amount of leafage on a plant will absorb far more carbon than the blossoms can give out. Thus you see plants in a room during daylight are really a benefit instead of being otherwise, since they purify the air by absorbing and removing carbon which is injurious to our health, giving out at the same time oxygen which is a necessity of our life. So much cannot be said for them after daylight departs; then the order of things is reversed, for during the hours of darkness the plants absorb and retain oxygen and release and give out carbon to the air; this of necessity would be injurious to our health if there were no remedy or counteracting influence to nullify the bad effects. You can receive no harm from the carbon if you leave your bedroom window a little open during the night to cause a circulation of fresh air; the least bit will do. You should do this in any case during summer, for it is very beneficial to the health of the sleepers. Or if you place the plants on the floor the evil will be remedied to a great extent, for the carbon which is half as heavy as common air, will fall to the floor. But when we know that "we breathe out but a small quantity of carbon during the hours of sleep as compared with the quantity exhaled during the day," and that "the quantity of carbon given out by the plants at the same time is not large," the presence of plants in your bedroom at night can scarcely have

any bad effect. I hope you understand this clearly. It is a rather confusing statement of the case, but it proves that there need be no fears of any evil effects arising from having plants in your rooms, either day or night. But there is one exception to the rule ; it is known that the blossoms of plants give out more carbon than any other part, therefore hand or table bouquets should not stand in your room during the hours of sleep. Of course you can avoid this by having them put somewhere else till morning.

There is another question of very great importance regarding having flowers in your room after daylight, that is, is it natural and healthy for the plants themselves? When night comes on and brings its season of rest to us, we never consider that our poor plants incline for rest too. All plants in the open air go to sleep, so to speak, when the hours of darkness set in. The air becomes several degrees colder, soothing their strained energies, and hushing them into their natural rest, which enables them to meet with renewed vigour the rays of burning sunshine when day returns. Now when night comes on we draw down the blinds, shut our doors and windows, stir up the fire and crowd around the cheerful hearth all unconscious that by keeping out the cold and raising the temperature of the room several degrees we are keeping the poor plants in a state of unhealthy excitement, keeping them feverishly awake when they should be at rest. Thus like ourselves when we get no rest during the day and no sleep during night, they grow weak and sickly, losing the fresh robust appearance they wore when we

first made their acquaintance. Try, if possible, therefore to give your plants cool dark quarters during the night, for on this greatly depends your success as a window gardener. Window gardening at best is plant growing under difficulties ; the more therefore you can assimilate their existence to the life of the same plants in their natural homes the more successful you will be.

Gas has a most poisonous effect on plants in a room. In fact no plant can live or thrive in a room where gas is burned. Then it is a necessity to remove them from the room during night and place them where they will not breathe the poisonous gas. A passage or lobby is a very suitable place till morning, provided there is no danger of frost in the winter.

Plants growing in a room require a good deal of shifting about. You should never allow yourself to consider this a trouble. The poor plants have life within them and they appreciate in their own dumb way all attentive kindnesses bestowed on them ; a lover of flowers will understand this plainly, who sees in his plants so many little beings depending upon him or her for their very existence. Be careful and kind to your plants and they will do their very best to please and reward you.



## CHAPTER IX.

ON THE GENERAL CARE OF PLANTS AND THE WINDOW  
GREENHOUSE.

LET us consider now, dear readers, what we can do to keep our window plants clean and healthy. We all know that dirt and untidiness with us is much against our bodily health and often the origin of disease. It is the same with plants. Unless we can keep our plants free from dirt and insects, and allow them plenty of fresh air and sunshine we cannot hope to be very successful in growing good specimens. In the course of our daily duties, dust, less or more, settles on our window plants, till by and by they get quite grim and grey. You will understand how hurtful this is when I tell you that the leaves of a plant are its lungs. The leaves and stalks of a plant are perforated with innumerable small pores, in much the same way as the human skin. Through those small pores they inhale the fresh air so necessary to their existence and exhale the oxygen so necessary to our life. And through them they absorb moisture from the air around them, and give out the excess of moisture to the air again. You would hardly believe what a great amount of moisture a plant gives out in a

day; some plants giving out more than their own weight. You will understand then how necessary it is to keep your plants clean, so that the pores in their foliage may not be stopped up and impeded in their action. Wash your plants therefore every now and then, and whenever there is a warm shower, during summer, turn them outside and let them have the benefit of it. They delight in a summer shower. It does one's heart good to see how thankfully they bathe in the welcome raindrops, coming back when the shower is over with their faces perfectly shining.

When you wash your plants use tepid water, with a little soap dissolved in it, and a bit of sponge or flannel. The operation requires to be gently done, especially with Ferns. Keep the stalk of the leaf between your fingers, and the leaf lying in the palm of your hand, washing outwards to the point. Don't rub the leaf but just draw the sponge gently over it leaf by leaf. Water overhead with a rose after you have finished, to wash off any soap or dirt left. Do not water over head if the plant is in bloom, but just contrive to water the foliage only. Always choose a dull day, or the morning or evening, to wash your plants. A warm sun is so apt to blister the foliage, if dripping wet when the sun shines on them.

Light and air are absolutely necessary for the health and well-being of your plants. You may as well expect a prisoner shut up in a cell to grow fat and rosy as expect a plant to thrive in a dark corner, where it never gets the warm sunshine or breathes the free air of Heaven. As soon as daylight comes in, place your



plants as close to the window as you can manage without crushing them. Expose them freely to the light, shading only when the sun is very warm. Geraniums for instance never need any shade. Cinerarias, Calceolarias and some other soft wooded plants require shading from a very warm sun. Ferns and



CALCEOLARIA HYSSOPIFOLIA.

mosses again, always succeed best if so placed that the sun never reaches them, but still near enough to the light. A window that the sun does not shine on suits them to a nicety. When plants are kept at a distance from the light they get weak and sickly, throwing out lean unhealthy branches and turning their leaves all

one way, as if supplicating the approach of the light they cannot do without; and if at the same time they are denied a breath of fresh air they lead a wretched existence, and ultimately die of sheer neglect. I do not believe any of my readers would allow their pretty plants to come to such an untimely end. No, no! give the poor plants what is so necessary to their existence—plenty of light and air, sunshine and shower. Keep them clean and tidy and they will show their gratitude in many ways; and never forget to turn your plants round every two or three days, or else they will be sure to grow one sided. Give them plenty of air by opening the window every day, when not too cold. Open the window from the top, never from the bottom, which causes a cold draught. They do not like a cold draught any more than we do ourselves. On fine days during a warm shower, place them outside; it will do them great good and give them robust constitutions, and enable them to stand any extremes they may be exposed to; just as when we ourselves take plenty of open air exercise we are not so liable to catch colds in windy and cold weather as those who keep indoors afraid for a breath of air to blow upon them.

In the management of the miniature greenhouse we constructed in a former chapter airing is one of the principal things connected with it. Do not be afraid of giving it air during fine weather—during the summer especially. Before the morning sun is much on it, you should give it a sprinkling with water at about 65 or 70 degrees of heat, all round the inside and over the plants, with a small syringe or fine rose. This refreshes

the plants and raises a soft moist atmosphere in which they delight. This you will clearly understand if you have noticed how refreshed everything in nature looks after a summer shower, and how robustly everything grows in showery summer weather. As I told you before, the leaves and stalks of plants have innumerable little pores all over their surface, through which they inhale moisture from the air around. Now this damping of your little greenhouse is like giving the plants a pleasant draught which they drink up greedily. Of course this is summer treatment; during spring and autumn it is seldom necessary, as the days are so much cooler.

About half an hour or more after syringing open the top airing an inch or so; an hour after that, open it half up, and by ten or eleven o'clock you will be able to lift it up full, and if the day is very sunny draw down your blind then. At midday open the front airing for two hours or so. Front airing however need not be given in dull days, and never during spring or autumn, but when the sun is very hot. The front airing should be taken off about 2 o'clock or as soon as the full glare of the sun is past. When the sun is slanting from the west draw up the blind and reduce the top airing half. Then a little before sunset shut it off, except half an inch to allow the exit of steam which will arise, for you have now to water your plants if they are dry and then syringe again as you did in the morning. The half inch of air may be taken off at bedtime. During very warm summer weather it is better left on all night to keep the plants cool. This

is the proper treatment to give your little greenhouse. I wish you to consider what I have said about it earnestly. I have told you in as plain words as I can, and I hope you will follow the directions I have given. Read them over often till you have a clear idea what to do, and there is no fear of your being unsuccessful in its management. You will notice I have not said any thing about winter treatment for your greenhouse. This is hardly necessary, for, unless you can heat it, the plants must be all brought inside the window at the approach of winter. Here I will tell you a very simple contrivance by which you can have your plants in your greenhouse for a considerable part of winter, when no severe frost is in the air. If the night is frosty or cold, fill a stone jar—what is commonly called a greybeard will do—full of hot water and place it inside your greenhouse after sunset. Have another hot one to replace the cold one at bed time. This warms the greenhouse nicely and keeps out a moderately keen frost, if at the same time you have a bit of old carpet or such like material to put on the roof outside. This is a very simple way of heating by hot water. And, in fact, you would benefit your plants a good deal by doing this on any very cold night during the fall of the season and the early spring. If you wrap the greybeard in two or three folds of flannel or any old woollen stuff the heat will be economised and last some time longer.

I had intended to say a few words in this chapter about insects and their prevention and cure, but giving them a short one to themselves will make it plainer for you.

## CHAPTER X.

## INSECTS : THEIR PREVENTION AND CURE.



THE insect which most generally attacks plants is a kind of aphis, commonly called the greenfly. It becomes quite a plague on plants if allowed to increase, which it does at a most astonishing rate. If left to themselves they would soon bring your plants to a most disreputable condition, ultimately killing them outright. They are always worst on soft-wooded plants, such as Calceolarias, Cinerarias, Pelargoniums, &c. A healthy robust growing plant is not so liable to be attacked as a sickly one. A sickly plant is their great delight. They feed on the underside of the leaves like a flock of miniature sheep, and cluster around the tender shoots and flower buds with the most persistent greediness, causing the leaves to curl up and turn yellow, and the tender shoots and flower buds to grow deformed and crooked, arresting their growth and expansion. Thus you see greenfly is an enemy you must give no quarter to. Hunt them down and destroy them whenever they make their appearance. Do not kill them on the leaf if you can help it. With a little brush or a feather you will be able to sweep them off

into your hand, or anywhere where you can destroy them.

Tobacco smoke is the surest and best thing to kill them. If you have a window greenhouse you can easily manage this by shutting it close after sundown and filling it with tobacco smoke. All plants in bloom that have no fly on them should first be removed not to let the smoke damage their bloom. For the operation you will need a tin canister with several holes punched through the bottom, a handful of tobacco paper, and a red hot cinder. You will always be able to get an old canister. Tobacco paper you can purchase at one shilling and sixpence per pound, from any nursery-man or seedsman. Half a pound will do for several applications. Tease out the paper and put a small handful above the red cinder in the canister, and place it inside the greenhouse on the edges of two small pots to cause a draught, and shut it up close. When the house is quite full so that you can hardly see the plants, take out the canister quickly and keep the greenhouse shut for nearly half an hour; then open it and let out the smoke and the deed is done. After the smoke is all out take the plants to the door and give them a good syringing to remove the dead and dying insects. Take care not to overdo it in smoking plants, as you might burn them; better do it moderately and repeat it than overdo it once.

If you have only one or two plants infested the best plan is to have a large paper bag big enough to cover the plant entirely and close enough down so that a handful or two of soil may be put round the bottom to

keep it close ; this with one of the corners torn off makes an excellent smoking apparatus, and you need only to puff the smoke from your pipe in at the corner till the bag is full. Keep the corner shut with your fingers, or pin it close for some time, and then let the smoke escape by the corner.

Two other insects, a small red spider and a longish grey insect called Thripe, are very bad on plants. Treating them the same way with tobacco smoke, and washing the plants well, will exterminate them quickly. They are as great a plague as greenfly when allowed to increase.

There are three other insects which may trouble you sometimes, called Brown-scale, White-scale and Mealy-bug. It is just a chance if ever you are troubled with them. Brown- and white-scale stick close to the stems giving them a spotted appearance. Mealy-bug looks like a small patch of down sticking in the axil of the leaves ; it is a small yellowish grey insect much like a bug in shape with a soft white downy substance wrapped round it. Hardwooded plants only are infested with scale. Mealy-bug attacks hard and soft wooded plants alike. A sponge and soap and water is the best cure for them.

You may be troubled with slugs. They crawl over the plants leaving their slimy paths, and nibbling at the leaves and tender shoots, often causing great destruction. If you find their traces about your plants hunt for them with a candle at night among the leaves and pots ; you are sure to get them then if they are there, as they come out during night to feed.

I hope you will understand how to manage your plants now if infested with insects. But remember, plants, when kept clean and in good health, are scarcely ever troubled with insect pests.

It is when plants are neglected that insects make their appearance, therefore cleanliness, plenty of fresh air, and sufficient moisture, are your plants' best safeguards from their enemies.

Plants in closed cases are seldom troubled with insects, owing to the close moist atmosphere in which they grow. The one you will be most likely to find in your plant-case will be the mealy-bug, and that you can soon exterminate by washing; in fact, you will find washing with soap and water and syringing afterwards to be the best plan for cleaning all your plants, raising no bad smell and attended with no danger.

There are a great many preparations sold for washing and cleaning plants. I think you will find Fowler's or Clarke's to be the best and safest. They can be had from any seedsman, with directions for use.

And here I may refer you to 'Jones's Gardeners' Receipt Book' (Groombridge and Sons) for further information on this subject. You will find it a most useful companion, containing a mass of valuable receipts for the prevention and cure of insects and diseases of all kinds that plants are subject to.



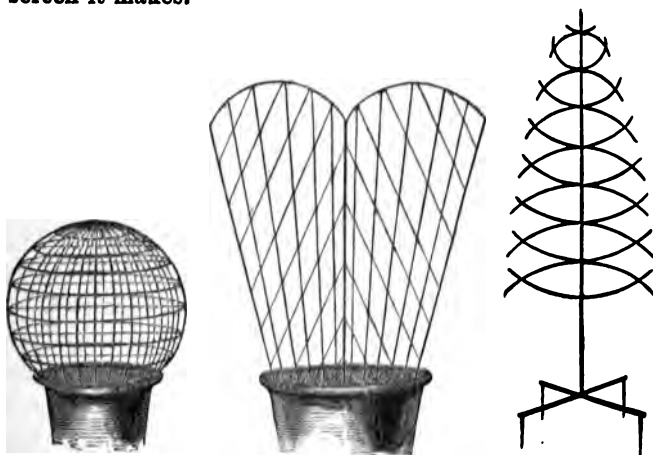
## CHAPTER XI.

## THE PROPAGATION AND TRAINING OF PLANTS.

O have some knowledge of the training and propagation of plants is very necessary. A few simple rules are all that you require, as taste and circumstances must guide you a great deal in this matter. Plants of a slender growth such as Fuchsias, Pelargoniums, Petunias, &c., should be staked with neat wooden stakes painted green. When staking keep the stakes behind the plant or branches to keep them out of sight a little. A pot of annuals such as mignonette may have four small stakes round the pot at equal distances, and small twine looped round them to keep the plants up. Primulas or Chinese Primroses, having slender necks, should have three little pins round their necks to keep them steady. Calceolarias will require every flowering branch staked to make handsome specimens, but four stakes the same as recommended for mignonette will do. Hyacinths and tulips are better staked with wire than wooden stakes, as it does not look so clumsy for such beautiful flowers.

Plants of a trailing habit, such as *Clematis*, *Petunias*,

*Tropæolums*, *Ivy-leaved Geraniums*, and many others, always look best trained over wire globes or trellis-work, as represented by the figures below. Ivy-leaved geraniums especially make a beautiful window-screen when grown in a box in your window and trained over an ornamental wire trellis fixed firmly to the box. Try this, and you will find what a pretty window-screen it makes.



WIRE PLANT TRAINERS.

To keep your plants in shape, if a strong shoot threatens to spoil the outline of your specimen, pinch the point off and it will throw out side shoots to keep the proper shape. Young plants of *Geraniums*, *Fuchsias*, &c., that you want to branch out and make bushy specimens, must have their leading shoots treated in the same way.

You can make very nice flower stakes out of common laths, but I think it would be far better to purchase them from a seedsman ready made. You can get them from ninepence to three shillings per 100, according to lengths of from one foot to three and a half feet. A bundle of 100 would last you for years, and they are always at hand when required.

Staking plants should be done neatly and room enough left in tying for the stems to swell. If it is a quick-growing plant, leave the stake considerably longer than the shoot to tie it up as it grows. A fuchsia, for instance, always looks best if trained as one leading shoot, with only one stake in the middle of the pot. Any weak or lengthy side shoots can be looped to the stake. This rule holds good for most plants if you wish your plant to be pyramidal in shape. The secret of neat effective staking, is to stake your plants properly with as few stakes as you can, not to have your pot full of unsightly stakes with little foliage to hide them. Supposing you have a plant with a good many shoots or branches, in staking that plant contrive if you can to have the tallest shoot in the centre and the smaller ones outside, and all equally round, so that it may be as well balanced on all sides as you possibly can make it.

The propagation of flowering plants is a very simple thing. A cutting when properly made and inserted in the soil only requires you to have a little patience till it roots, and to be left alone in the soil till then; not pulled up now and then to see if it is rooted, as many will do. The same may be said regarding your seeds

after they are sown ; let them alone in peace ; they will be showing their little heads above ground by and by ; they do not like being disturbed till then. To enable you to raise your own plants I will say a few words on propagation. It is but reasonable to think you will have a greater pride in a plant that you have raised yourself from a cutting or a seed than one you may purchase ready to your hand. Plants are propagated



DOUBLE FLOWER POT FOR STRIKING CUTTINGS.

from cuttings, seeds, and division. Geraniums and fuchsias, for instance, are very easily raised from cuttings in this way. Select a strong healthy shoot, cut away the lower leaves, then with a very sharp knife cut it cleanly through, beneath an eye or joint, and insert it with a dibber in the cutting pot, about an inch and a half deep. Calceolarias are easily raised by taking off

side shoots by a joint, cutting off the lower pair of leaves, and inserting the slips up to the first joint. In taking cuttings it is a rule either to slip them off at a joint with the joint or heal on, or, taking a part of a branch or shoot and cutting it clean across below an eye or bud. The reason for this is that a cutting roots far quicker and surer at a joint, or beneath an eye, than it would do at any other part of the stem. The sap or life-blood of a plant rises between the bark and the wood. When a cutting is taken off, the sore part of the wound inflicted must of course be where the flow of the life current has been stopped; so it is naturally there where it heals up first and the root appears. A cutting, when it shows signs of rooting, *calices* or heals up round the inside of the bark, much in the same way as you will see a tree heal over where a branch has been cut off. Directly after calicing has taken place the little rootlets make their appearance as little round knobs, which soon lengthen out searching for food to sustain the returning energies of the cutting, which is now entitled to the dignified name of a plant.

Cinerarias, musk plants, forget-me-nots, primroses, and other plants that throw out leaves or shoots direct from the crown of the root, can be easily propagated by division; that is, cutting them up into parts and potting the parts separately. Mosses or selaginellas are propagated by inserting several ends or pieces over the surface of the pot or pan that you intend for a specimen plant. Ferns in most varieties are propagated by division, those with creeping stems or rhizomes by simply cutting off a

part and potting it, and others that form a crown by cutting clean through the ball and crown and separating it. When inserting a cutting make a hole with a dibber and fill up the hole round the cutting with sand, which will prevent them much from damping away at the stem.

Annuals such as stocks, asters, mignonette, candytuft, &c., are all raised from seed. All flowers that spring, grow, flower, and die all in one season, are called annuals; biennials live and flower for two seasons or more. You have therefore to raise new plants of annuals every year, and can always have a change from one kind to another. And besides, they are very interesting, as you have the whole duration of their existence under your notice, from the germinating of the seed till they flower out and die. Their life is short indeed, but how lovely they are when in the height of their beauty.

A great many people err in sowing their seeds too deep, and are therefore disappointed in the result. Too deep-sown seeds are smothered. Never sow them much deeper than an eighth of an inch. Seeds vary much in size, and the depth of sowing must vary accordingly. Scarlet runners, nasturtiums, and sweet peas may be sown a quarter of an inch deep; stocks, asters, mignonette, candytuft, &c., just covered and no more. Very small seeds, such as calceolarias and lobelias, should be sown on a fine smooth sandy surface, not covered, kept damp, and have a bit of glass placed over the pot to keep the cold draughty air off. Always shade your seed pots or pans from the sun, for it would

soon dry them up, and destroy the germinating power of the seeds; a piece of brown paper tacked down over them till they are up will do very well. When you are going to fill a pot to sow seeds in give it good drainage and shake the soil down level in the pot; then sow your seeds on the surface, and with a flat piece of wood gently press the seed and soil level, then scatter some finely sifted soil loosely over it. Water with a fine rose, taking great care not to wash the seeds up or disturb them. Never let the seed pots get dry, and after the seeds are up take good care to wet the seedlings as little as you can as long as they are in their seed leaves; in case they damp away, contrive to water round the edge of the pot or box and in open spaces through. You can easily give all your different kinds of seeds their proper depth in your window-box, and shade them till they are up.

You will find it a delightful and interesting pastime, raising your own plants either from cuttings or seeds, and you will have a far greater interest in them, knowing them thus from their very infancy. I explained in a former chapter how to treat your seedlings after they are up to ensure a good display. Your cuttings, as soon as they are nicely rooted, should be potted with good potting soil into five- or six-inch pots, where they will grow very quickly into nice little specimen plants.



PRIMULA.  
(Lady Madeline Taylour.)



## CHAPTER XII.

SELECT FLOWERING PLANTS SUITABLE FOR WINDOW  
GARDENING.

**W**E have now arrived at a very advanced stage of our operations. We understand how to grow our window flowers to the best advantage. I will now select a few of the most suitable plants for taking under your care; and for the sake of those who have the ambition to grow some of the rarer kinds of plants I will make my selection pretty extensive. The acknowledged leaders of window plants are the universal Geraniums and Fuchsias. Their beauty and easy management cause them to be general favourites, and I will begin with them.

*Scented-leaved Pelargoniums.*—Lady Plymouth (variegated); Pheasant's Foot; Fair Emily; Fair Helen.

*Large flowering Pelargoniums.*—Bonnie Charlie; Charles Turner; Rifleman; Queen Victoria.

*Fancy Pelargoniums.*—Bella; Miss-in-her-Teens; Duchess of Somerset.

*Golden Tricolor Geraniums.*—Mrs. Pollock; Lady Cullum; Sir Robert Napier.



*Silver Tricolor Geraniums*.—Prince Silverwings; Lass o' Gowrie; Fascination.

*Bronze Geraniums*.—Her Majesty; Prince of Wales; Reine Victoria.

*Ivy-leaved Geraniums*.—L'Elegant; Duke of Edinburgh; Fairy Bells; Alba Grandiflora.

*Double Geraniums*.—Asa Grey; Scintillant; Maria Lemoine; Aline Sisley.

*Zonal Geraniums*.—*Red*. Vesuvius, Corsair, Anna Pfitzer, Wellington. *White*. Madame Vaucher, The Bride. *Pink*. Amaranth, Blue Bell, Delight, Beauty. *Variegated*. Madame Rendatler, Gloire de Corbeny, Seraph, Amelina Grusse.

*Fuchsias, single red*.—Black Prince, Wave of Life, Weeping Beauty. *Single white*. Lustre, Rose of Castile, Starlight, Elegantissima. *Doubled red*. Marksman, Avalanche, Harry Williams, Sir C. Coutts Lindsay. *Double white*. Mrs. H. Cannel, Carry Symes, Smith's Avalanche, Princess of Wales. *Various*, Alba Cocina, Crown Jewels, Sunray, Gracilis.

*Cinerarias*.—Splendid flowers when in full bloom. The great difficulty for a window gardener is to grow them well. It is best to purchase them full grown with the flower buds at the bursting. Keep them properly watered.

*Calceolarias*.—The same may be said of these as to rearing them. They are gorgeous flowers for a window. Purchase young plants ready for potting, or raise your plants from cuttings.

*Primulas*.—The *Primula Chinensis* or Chinese Primrose is a beautiful window plant, flowering during



**PYRAMID FUCHSIA.**

the winter months when we have little else in bloom. They are difficult to raise from seed unless you have a command of heat. You can purchase seedlings ready for potting at a moderate price. There are several varieties, red and white, single and double; and of late years a race of beautiful named varieties have come into great favour. Several of the hardy Primulas are well deserving pot room in your window, notably *Primula Cortusoides* and varieties, and *Primula Japonica* and varieties.

*Petunias* are a lovely class of plants, suitable for windows. They can be raised from seeds or cuttings, and are of easy cultivation. Treat them the same as Fuchsias. The following are a few of the best named varieties:—*Double*. Eliza Matheu, Garibaldi, La neige, Don Quixote, Elegant, Singularity. *Single*. Attraction, Butterfly, Evening star, Hebe, Keepsake, Unique.

*Calla Ethiopica*, or Lily of the Nile, is a splendid window plant, having large handsome green foliage, and large trumpet-like creamy white flowers. It is a general favourite.

*Hydrangea Hortensis* is a noble window plant and a general favourite, bearing large trusses of flower which last a long time. There are several varieties. The variegated one is very pretty.

*Begonias* are a very extensive class of plants, and all of great beauty. Several varieties are very easily grown, such for instance as the one commonly called the *Bleeding heart*.

*Astilbe (Spirea) Japonica*.—This is a very graceful

plant when in foliage and flower. It casts its foliage when flowered out ; and is a spring flowering plant.



ASTILBE JAPONICA.

*Coleus*.—Here we have a truly gorgeous class of plants, the foliage having all the brightest tints of yellow, red, crimson, and purple. They are tender plants, but do well in a window if kept from cold

draughts and well watered. They can be obtained at moderate prices after May.

*Lobelias*.—Blue and White—lovely little flowers, among the universal favourites. They are easily raised from seed or cuttings, and plants are very cheap.

*Statice*.—A pretty pot plant, with everlasting flowers, suitable for window cultivation. There are several varieties.

*Saxifraga*.—There are a great many varieties in this class. The one commonly called *Aaron's beard* is a splendid window plant for hanging basket work, and a general favourite.

*Heliotrophe* or Cherry pie is a highly scented flower, and a favourite with many. It makes a nice pot plant treated the same as Fuchsias, and is very cheap.

*Lemon Verbena*.—This is another highly fragrant plant; one of the universal favourites, and of easy cultivation in a window.

*French Lavender*.—This is also a very fragrant plant, with small prettily cut leaves; and of easy growth from cuttings.

*Myrtle*.—A very pretty greenhouse evergreen shrub suitable for window cultivation. The small-leaved variety is the best for windows, being dwarf.

*Orange*.—Sow a few seeds of an orange in a pot and you will soon have some nice little plants.

*Cuphea Platycentra*.—This is an old-fashioned bedding and greenhouse plant, much like a miniature Fuchsia, with small yellow-reddish flowers. A very pretty plant for a window. Treat it the same as Fuchsias.

*Musk*.—Every one knows this flower. It is a universal favourite for its strong musky fragrance. It is very common and easily grown.

*Myosotis*, or Forget-me-not, makes a lovely pot plant. There are several varieties of blue and white; easily raised from seed.

*Mimulus*.—This is another very pretty flower. Its large open blossoms are beautifully spotted and striped. It is easily raised from seed or cuttings, and makes a good window plant.



PEONY FLOWERED GLOBE ASTER.

*Mignonette*.—The great favourite of every one; of a delicate fragrance and easy cultivation. Everybody's flower.

*Stocks*.—A grand class of summer annuals and per-

ennials, first class for window boxes, and easily raised from seed.

*Asters*.—A companion to the stocks, requiring the same treatment, and easily raised from seed. Plants are very cheap, and you are surer of your stocks and asters by purchasing plants than sowing seed.



VIOLA PEDATA.

*Pansies and Violas*.—Universal favourites; a very varied class of plants, and splendid for window boxes. They are easily raised from seed or cuttings. Plants are very cheap.

*Arabis*.—Green and variegated; are very good window-box plants for spring flowering, and they rank with Wallflower and Gillflowers for spring display.

Here we will close this chapter, and in our next we will select a few of the best bulbous roots and plants, and plants suitable for small rockeries. It is difficult to select from so many plants of suitable habits, and there are many that would grow well in windows I

might mention. Most of the above list will do equally well in pots or boxes. Annuals of suitable kinds abound in great variety—Scarlet runners, Nasturtiums, Tropæolums, &c., for training round your windows; Candytuft, Nemophila, Virginian stock, Indian pinks, &c., too numerous to mention, for your window boxes. Seed packets of annuals are very moderate in price.



TREE VIOLET.

## CHAPTER XIII.

## BULBOUS-ROOTED AND ROCK PLANTS.



AS I said in a former chapter, a small rockery under your window in connection with your window box could be so arranged that rockery, window box, and creepers would appear to form one harmonious whole. Such a window in the height of the season would have a beautiful effect, and be the admiration of every passer-by. Clinkers from a furnace make a nice rockery. A few white pebbles and shells heighten the effect. Raise a mound of soil and build your materials over it as naturally as you can, leaving crevices in which to plant your roots and flowers. I will select a few of the most suitable plants for a rockery.

*Aubrietia*.—A lovely little rockplant of many varieties, with green and variegated foliage. Grows in a dense tuft or mass.

*Cerastium tomentosum*.—A silvery foliaged mouse-ear chickweed; flowers white.

*Arabis*.—A hardy class of spring flowering plants suitable for rock-work, of various kinds, green and variegated; flowers white.



**ECHEVERIA SECUNDA GLAUCA.**

*Echeveria*.—This is an excellent class of plants for rockwork. *E. pumila*, *E. glauca*, *E. secunda*, *E. secunda glauca*, and *E. secunda metallica*, are the best for our purpose.

*Armeria*, or thrift, the well-known sea daisy; very pretty rock plant; flowers red and white, double.



SEMPERVIVUM ARACHNOIDES.

*Sempervivium*.—Similar to the above. *S. Californicum*, *S. arachnoideum*, and *S. montanum* are the most suitable. No rockery is complete without *Echeverias* and *Semperviviums*.

*Glechoma*, or ground ivy.—A pretty trailing rock

plant with delicate pink flowers. The golden and silvery variegated varieties are very pretty for a rockery.



**SEDUM SPECTABILE.**

*Sedum*.—An indispensable class of plants for rock-work. *S. acre*, *S. acra aureum*, *S. Hispanicum*, and *S. glaucum*, are the best. They are easy to grow and cheap, and look lovely on a rockery.

*Heartsease and Violas*.—Well-known flowers for the open border, and do very well for rockeries where there is room.

*Hepatica*.—A lovely spring-flowering class of plants; looks pretty in a rockery. Small ivy-like foliage; flowers white, red, and blue, double and single.

*Antennaria tomentosa*.—A perfect little gem; no higher than moss on a stone or tree, and nearly like snow for whiteness.

*Stellaria graminea Aurea*.—A beautiful golden chickweed, suitable for rockwork, its yellow foliage forming a good contrast to other plants.

*Vinca*, or periwinkle.—The minor gold and silver variegated varieties are excellent rock plants; flowers blue and white.

*Saxifraga*.—A splendid class of plants for rockwork. The common *London pride* is well known. One of the best is *S. longifolia vera*.

Ivy-leaved geraniums, lobelias, dwarf nasturtiums, Linaria, Lysimachia, and several other plants, do well in a rockery, provided they do not crowd the others. Ferns are excellent rock plants. I will note those suitable for the purpose in the chapters treating on ferns, and will select a few of the most suitable bulbous-rooted plants for window gardening before I close this chapter.

*Hyacinths* are particularly adapted for cultivation in pots, glasses, and jardinets. The proper soil for them is composed of two parts turfy loam well decayed, one part dry cowdung well rubbed down, one part leaf mould, and one part silver sand. This soil suits tulips also, and snowdrops, crocuses, &c., with a little less manure. When potting your bulbs give good drainage, and place the bulbs on the surface, pressing them down into the soil till nearly covered. Crocuses

and snowdrops should be about an inch under the surface. Hyacinths in glasses require rain water, and the glass should be filled till just touching the bottom of the bulb. Renew the water now and then as it gets impure, and keep adding more as the roots drink it up. October is the best time to fill your glasses and pots. Keep them in a cool, dark place—a closet would do—till they have grown an inch or so. After this bring them out to the light and let them have as much fresh air as possible. Keep them from frost, but as cool as you can above it. Frost destroys the bloom. The double varieties are not so good for pots or glasses as the single. Among the best are the following:

*Red.*—*d.* Bouquet Royal, *s.* Amy, *s.* Baron Rothschild, *s.* Prima Donna, *d.* Princess Royal, *s.* Von Schiller.

*Blue.*—*s.* Grand Vedette, *d.* Rembrandt, *s.* Celestina, *s.* Grand Lilas, *d.* Prince of Saxe-Weimar, *s.* Shakespeare, *s.* General Lauriston.

*Lilac and Mauve.*—*s.* Adelina Patti, *s.* Haydn, *s.* L'Unique.

*White.*—*s.* Grand Vedette, *s.* Blanchard, *d.* La Virginite, *s.* La Vestale, *d.* Prince of Waterloo, *s.* Queen Victoria, *s.* Seraphine.

*Yellow.*—*d.* Heroine, *s.* Overwinnaar, *s.* King of Holland.

*s.* stands for single; *d.* for double flowers.

You can purchase much cheaper Hyacinths for your window box than those I have enumerated; the same of the Tulips.

*Tulips* are magnificent spring-flowering bulbs very

suitable for pots and window boxes. The following are the best for the purpose. Plant at the same time as you plant your Hyacinths; the double Tulips are best. Equal parts of turfy loam, leaf mould and sand, form the proper soil. Double Duc Van Thol. and single Duc Van Thol. *s.* Ardennus, *s.* Queen Victoria, *s.* Duchess de Parma, *s.* Pax Alba, *d.* La Candeur, *d.* Duke of York, *d.* Rex Rubrorum, *d.* Purple crown, *d.* Yellow Rose, *d.* Tournesol, *d.* Tournesol Yellow.

*Crocus*.—This and the Snowdrop are the first heralds of spring. Nothing is so suitable for window gardening as the lovely Crocus. In boxes and pots they should be planted pretty close. The best are the following, in different shades of white, blue; yellow, and purple; soil same as for Tulips:—Albion, Charles Dickens, Florence Nightingale, Prince Albert, Mont Blanc, Sir Walter Scott, Lilacinus superba, Othello, Barr's new golden yellow, Yellow Dutch, Yellow Scotch.

*Snowdrop, the Harbinger of Spring*.—Beautiful in pots and boxes. Treat them the same as the crocus. There are both double and single bulbs.

*Muscaria*, or the Grape Hyacinth, are charming subjects for pots or boxes to mix with Hyacinths and Tulips. The same treatment as for Crocus or Snowdrops. The best are *M. botryoides cœruleum*, *Album*, and *pallidum*, and *M. racemosum*, and *M. racepalleus*.

*Amaryllis*.—Here we have a magnificent class of plants for pot culture. Pot them in six- or seven-inch

pots with good drainage, in equal parts of loam, leaf mould, and silver sand, with one half part peat. The secret of flowering them is to leave them undisturbed in the same pot for years, giving them little water when at rest, and plenty of water when actively growing. The best for pots in windows are the following :

*A. atamasco*, the Atamascan Lily.



LILIUM LANCIFOLIUM.

*A. candida*, "the flower of the west wind."

*A. lutea*, "the lily of the field," supposed to be the lily of Scripture.

*A. Vallota purpurea*, the Scarboro' lily. This last-named is the best for windows, and is of the highest

order of merit. Its large scarlet blossoms are unequalled for beauty and effectiveness.

*Lilium*.—This is the queen of window plants and easily cultivated. Nothing can surpass well-bloomed plants of the following varieties :

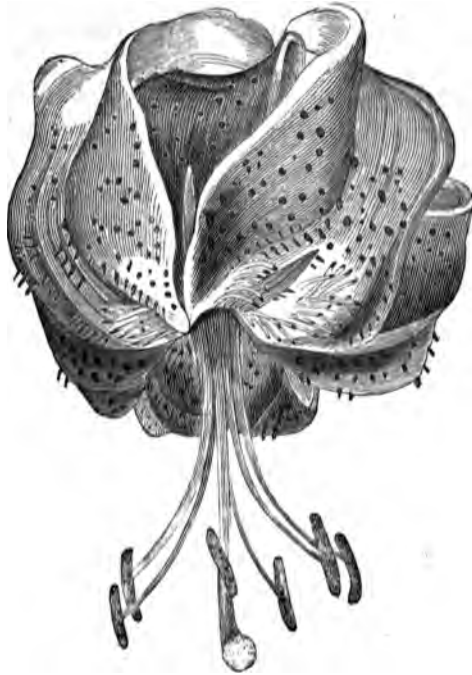
*L. speciosum album*, *L. speciosum rubrum*, *L. speciosum roseum*.



LILIUM THUNBERGIANUM.

But by far the grandest of all the Lily tribe and well meriting the name of "Queen of the Lilies" is *Lilium auratum*, the flowers when expanded being six or eight inches across, sometimes nearly a foot; colour creamy-white with gold bands and reddish spots. The best soil for them is the same as for *Amaryllis*.

*Convalaria majalis*, or Lily of the valley, is a splendid pot subject or to mix with other bulbs in the window box. Plant four or five tubers together in a



FLOWER OF LILIUM LANCIFOLIUM.

clump, and three of the clumps in a pot. They are favourites with every one.

*Cyclamen*, a charming tuberous-rooted plant for winter and spring blooming, of easy cultivation, having

pretty variegated foliage. The best soil for them is composed of equal parts of loam, leaf mould, and silver sand. The best for pots are *Cyclamen Persicum*. Plant the tubers in the pot fully half below the surface, and never let them get dry. Water them overhead.

*Ranunculus*.—Very pretty root for window boxes. Plant in your window box in January, an inch under the surface.

*Anemone*.—A companion to the *Ranunculus*. They are both exceedingly cheap and very lovely when in flower.

There are many other bulbous and tuberous-rooted plants suitable for window gardening, too numerous to mention here, however. The above list contains the general favourites, and can be procured from any nurseryman. The best dealers in them I know of are Barr and Sugden, King Street, Covent Garden. They keep almost every bulb or tuber known to gardeners. Bulbous-rooted plants all require plenty of water while growing, and are all lovely to behold in a window, and repay you tenfold for your trouble when they spread their charming flowers and fill your room with their delicate fragrance. One of the great causes of their being such general favourites is that they are in their glory when there is very little else in flower.

## CHAPTER XIV.

### FERNS FOR WINDOW GARDENERS.



WINDOW gardener can hardly say his selection of plants is complete without an addition of choice Ferns and Mosses, either in pots or in a Wardian case, or under a bellglass (see illustrations, pp. 95, 96); and they are always a necessity for a choice rockery. Their feathery growth, graceful habit, and easy cultivation render them general favourites, worthy of your attention, and pleasing ornaments in a stair-landing window, or a window where flowering plants do not succeed for want of sunlight.

To grow a few select ferns and mosses, in a closed or Wardian case, in such a position, or in the favoured precincts of your sitting-room, is a very pleasant pastime; and more so when, as in the Warrington case, you have a fernery and aquarium combined. See accompanying illustration, next page.

The common wild British Ferns and their varieties being the most adaptable and easiest obtained, will be the Ferns we will take principally under our notice, although to be sure there are several Greenhouse ferns

admirably suited for the same purpose. I will specify them in another chapter.

The natural haunt of the Fern tribe is in the leafy



FERN CASE AND AQUARIUM.

solitudes of the forest, on the free open breadth of heath and common, among the rocks by the sound of falling waters and crystal streams, and in the fields,

hedgerows, and shady lanes of the healthy open country. There the merry skylark cleaves the air with fluttering wings, pouring forth his flood of melody, and the woods and copses echo with the



BELL GLASS WITH PLANTS.

thrush and blackbird's notes, while the golden sunshine fills the air with the hum of insect life. When the long happy summer days come round, and every thing is gay, then is the time for taking a holiday and

going Fern-hunting in the country ; and to enable you to know at once the best Ferns to gather for your purpose, I will select the most suitable, and describe their several distinctive characteristics as plainly as I



FERN CASE.

possibly can. In the country you will discover plenty of Ferns nearly everywhere you go ; the most common being the Male Fern, *Lastrea Filix-mas*, the Triangular Buckler Fern, *Lastrea æmula*, the Mountain Buckler Fern, *Lastrea montana*, and the Lady Fern, *Athyrium Filix-fœmina*. But these have such a strong robust habit of growth that they are unsuitable for window cultivation, unless during the first year or two of their existence. The dwarf-growing kinds are the most suitable for the confined space in your window or miniature greenhouse. However, the larger grow-



AQUARIUM WITH FERNS





**LASTREA CERNUA.**

ing Ferns may suit those of my readers who have a rockery, or small conservatory, so for their sake I will enter them in our list. When collecting Ferns in the lanes and heathy commons; take care to lift them with



**ATHYRIUM FILIX-FEMINA, VAR. CORYMBIFERUM.**

good roots, and wrap them up from the warm air and sunshine. When you get them home stand their roots over night in water to freshen them up before you pot them.

Give them always good drainage, and soil composed of equal parts of peat-earth, loam, leaf-mould, and silver sand, with a few small lumps of sand or broken brick amongst the soil, which helps to keep it open, giving the water a better chance of percolating freely away, and thus giving the soil less chance of becoming sodden or sour. After potting stand them in the shade for two days or so till they recover their wonted freshness. We will notice the most suitable ferns first; the large-growing kinds we will notice briefly afterwards.

*Asplenium viride*, or green spleenwort, is an elegant little evergreen tufted fern, the fronds varying from two to eight inches in length, supported on short dark-coloured stems or stipes, the rachis or midrib entirely green throughout. The pinnæ or divisions of the frond are very small, and ranged nearly opposite to each other, attached to the rachis by little stalks of their own. The pinnæ being distant from each other, and gradually lessening towards the point, give the fronds a narrow, elegant appearance.

It is a pretty little fern for pot culture or the shady moist parts of rockwork. It requires good drainage and protection from the hot summer sun.

*Asplenium Trichomanes*, or the common maiden hair spleenwort, is very like *A. viride*, and often mistaken for it. It is easily distinguished from *A. viride*, however, by the fronds having purplish-black stipes or stems and rachis instead of green, the pinnæ of the fronds being of a deeper green, rounder in form, and placed with greater regularity along the rachis or mid-

rib. It is evergreen, the fronds reaching nearly one foot in length when found in damp favorable situations, but generally from three to six inches. It is very common, growing on old walls, bridges, rocks and ruins.

It is very easily grown when once established, making itself at home in either pots or rockwork. The upper or drier parts of rockwork suit it best.

*Asplenium marinum*, or sea spleenwort, is a very thinly located fern, found only on the south-western coast of Great Britain and the Channel islands. It is too tender to stand exposure in the open air any further north. It is a maritime fern, evergreen, of tufted growth. The fronds are generally from six to ten inches long, of a leathery texture, supported by rather short dark brown stipes or stems. The pinnæ or divisions of the fronds are placed alternately on each side of the rachis, and are either scalloped or cut round the margin, the whole frond having a lanceolate or lance-shaped appearance, and darkish green coloured.

They make handsome specimens when grown in a moist warm atmosphere, such as in a Wardian case in a warm room. They also do well in pots in a window if the room is warm, and plenty of moisture given over head and protection from the sun's warm rays.

*Asplenium adiantum-nigrum*, or the black maiden-hair spleenwort, is an evergreen fern met with in most parts of the country. It is of tufted growth, the fronds ranging from two inches to a foot in length according as it is situated on walls, grassy banks, or shady hedge-

rows. The fronds are supported by shining purplish-dark stipes or stems. The pinnæ are divided and subdivided, the lower pair always being larger than the upper, giving a triangular shape to the frond, which is of a dark green, and leathery in texture. It is a very pretty and serviceable fern, making itself quite at home in the shady parts of rockwork, and is easily grown in pots. The variety *acutum* is a rare and rather tender fern, but makes a beautiful pot plant, nearly triangular in the form of the fronds, and much more robust and graceful in outline.

*Allosorus crispus*, the mountain parsley fern, or rock brakes, is a well-known pretty little fern, of an elegant parsley-looking habit of growth. It is a general favorite. The fronds, which vary from two to six inches in height, are of a delicate light green and a little triangular in shape, supported on slender smooth green stipes about the length of the frond. Its fronds appear in spring and die down in autumn, and are of two kinds, barren and seed-bearing, both much divided, the barren fronds having wedge-shaped segments, and the fertile fronds having oblong roundish segments, which are the highest of the two, causing a noticeable distinction between them.

It is an excellent pot fern, and very suitable for rockwork.

*Adiantum capillus veneris*, or the common maiden-hair fern. This is the only species of the true maiden-hair fern belonging to Great Britain, and is very rare. It is a pretty graceful evergreen fern, with delicate, rather drooping fronds from six inches to a foot in

height. The stipes and rachis of the fronds are black and shining; the fronds themselves of an irregular ovate form, much divided, rising from a short creeping stem clothed with small black scales. The entire plant has a delicate feathery appearance, from the much divided state of the fronds. The ultimate pinnæ or leaflets are small, roundish, or wedge-shaped, of a thin delicate texture, and pretty pea-green colour.

This is a lovely fern for the miniature greenhouse or a Wardian case, and a favorite with every one. It requires shelter, being too tender to stand outside or exposed.

*Blechnum spicant*, or common Hard Fern, is a very common one, occurring in almost all situations, very plentiful on heaths and commons, but flourishing best in damp woods. It well deserves the name of common Hard Fern, being of a hard rigid texture. It is one of the prettiest and most distinct of wild Ferns, having like the preceding both barren and fertile fronds. The fertile fronds rise straight from the centre, varying from six inches to two feet in length, supported on thinly scaled dark brown stipes, towering rigidly above the barren fronds which cluster around them with a drooping, rigid gracefulness, supported by short dark-coloured stipes. The fronds are narrow and lance-shaped, the barren ones being broader and about half the length of the fertile ones, and both divided to the midrib, having a comb-like appearance. The entire plant has a peculiar graceful foliage.

It is a very suitable Fern for rockwork, growing freely without much trouble, and does very well in pots.

*Ceterach officinarum*, or scaly spleenwort, is a very pretty diminutive fern found in the crevices of old walls, growing in tufts. The fronds are from two inches to six inches in length, and are of a deep green on the surface, and covered with a profusion of brown rust-coloured scales on the under side, contrasting prettily with the deep green of the upper side, especially when the under side of the young fronds are exposed to view. The fronds are lanceolate in form and divided into blunt roundish lobes. It is very difficult to establish this fern when under cultivation. It should be potted high, and kept rather dry and cool.

*Cystopteris fragilis*, or the Brittle Bladder Fern, is a very graceful Fern, of a tufted spreading habit of growth, not evergreen, the frond appearing in spring and dying down in autumn. It tends to form itself into several small crowns from which the fronds rise, varying from six inches to a foot in length, supported by very brittle stipes or stems of a shining greenish colour. They are lance-shaped and much divided; the divisions, placed separately in pairs along the rachis or midrib, are of a lanceolate pointed form, much divided, serrated, and lobed round the margins. The entire plant is of a graceful habit and a pleasing green colour.

It is a common Fern in some districts, preferring moist rocky situations, and is quite a gem for pot culture or rockwork, and of very easy management.

The variety *Dickieana* is a lovely little Fern of a much dwarfer habit than the usual form of the species, varying only from three to six inches in height, and

lanceolate in form. The pinnæ or divisions are lanceolate and so close and deflexed that they overlap each other. It is a very pretty little fern, constant under cultivation, and of a pleasing dark green colour.

There is another variety, *dentata*, midway between the two foregoing kinds, its fronds averaging from six to eight inches in height. It is a very desirable variety.

*Cystopteris regia*, or Alpine Bladder Fern, is another pretty little fern of an elegant tufted diminutive growth. Its fronds appear in spring and die down in autumn, and are from four to eight inches in height, of a bright green colour, supported on short smooth stipes, scaly at the base, and rising from a crown. They are lanceolate, and divided; the divisions, nearly opposite each other, are much divided and subdivided, giving the entire fern a very elegant appearance. It is rather tender in constitution.

This fern is quite a gem for pots or a sheltered rockery.

*Polypodium vulgare*, or common Polypody, is a very common fern growing almost everywhere, over old walls, ditch banks, and trunks of trees. No dweller in the country can miss seeing it by the wayside. It is an evergreen fern with a creeping stem about as thick as a pencil, thickly covered with brownish pointed scales. It creeps along by means of this stem, throwing up from the upper side its deeply cut lance-shaped fronds, about six or eight inches in length, of a darkish green colour and rigid habit.

It is an excellent fern for rockwork and does very well in pots.

The Welsh Polypody or *Polypodium Cambricum* is a remarkable variety of the above, having the lobes of the fronds broader and irregularly lobed a second time into sharply toothed lobes.

It is a pretty fern either for pots or rockeries.

*Polypodium Phegopteris*, or Beach Fern, differs considerably in habit and form from the last. It is not evergreen, the fronds appearing in spring and dying away in autumn. It has a slender creeping stem slightly scaly from which the fronds are thrown up, supported by very long fleshy brittle stipes. The fronds are from six inches to a foot in height, triangular in form, rather hairy, and of a delicately pale green colour, divided, the lower divisions opposite and lanceolate in form, and deeply lobed or divided again. The lowest pair of pinnæ are much smaller than the pair above, and reflex backwards in a peculiar manner, which is a very distinct feature of this species.

It is a good fern for a Wardian case or for pot culture, requiring plenty of water and good drainage.

*Polypodium Dryopteris*, or Oak Fern, is a lovely little slender pea-green fern, appearing in spring and dying down in autumn. It has a slender creeping stem from which the fronds rise, supported on brittle dark-coloured stipes, much longer than the fronds, which vary from four to eight inches in height, and are triangular in shape, each frond being divided into three nearly equal parts, each part triangular divided and subdivided. No other Polypody has the fronds so equally divided. It often forms into dense tufts and is quite a gem.

A first-rate fern for a Wardian case or for pot culture, and does well on the shady parts of rockwork, and a general favourite.



*SCOLOPENDRIUM VULGARE. RAMO-MARGINATUM.*

*Scolopendrium vulgare*, or the Hart's tongue Fern, is very common on old walls, hedge-banks, rocks and river-sides. It is an evergreen Fern of tufted growth, the fronds being simple or undivided, of a beautiful bright green colour, and stout leathery texture, varying from six inches to a foot in length, supported on rough scaly brown stipes or stems. The fronds are slightly waved at the margin, strap-shaped, forming a circular drooping tuft, elegant of outline, contrasting very distinctly with the usual feathery appearance of Ferns, and is a general favourite.

In shady moist situations it forms beautiful specimens. It is one of the very best Ferns for open rockwork, and makes a beautiful pot plant for the window.

Some of the varieties of this Fern are very beautiful and curious. *Crispum* has the margins of the fronds greatly developed, giving them a rich wavy crisped appearance. There are numerous other varieties, such as *polyschides*, *multifidum*, *laceratum*, and *ramo-marginatum* (see illustration), all worthy your attention and very suitable.

*Trichomanes radicans*, or European Bristle Fern, is a very lovely and elegant little plant of a delicate half transparent texture, found only upon dripping rocks in the immediate neighbourhood of waterfalls. It has a scaly wirelike creeping stem, nearly black in colour, from which the fronds rise supported by dark-looking stipes, having a thin pellucid texture or continuation of the leafy parts embracing them continued along the rachis or midrib. The fronds are three or four times divided, and cut again into small-lobed segments of a delicately thin semi-membranous texture.

It is only found in Ireland, where it creeps and grows most luxuriantly among the rocks where constant moisture is maintained. In cultivation the same moist atmosphere must be kept up. It can only be grown therefore by being kept close in a Wardian case, or under a bell-glass, and often watered overhead. It shrivels up if it gets dry or exposed to the sun. Its transparent loveliness has made it a great favourite with cultivators.

*Woodsea Ilvensis*, or Alpine woodsia, is a tufted diminutive species, and very rare; found in the crevices of moistened rocks in high mountainous regions. Its fronds, which appear in the spring and die down in

autumn, rise from a crown, and are longish and narrow, divided into several lobed divisions or pinnæ, placed alternately along each side of the midrib. This is an excellent little fern for a case, and does well along with the filmy ferns.

*Asplenium Ruta-muraria*, or the wall-rue, is a very diminutive fern with tenacious wiry roots, found abundantly in some localities on old walls. Its fronds are very like the leaves of the garden rue in shape, and evergreen. It is a pretty little subject for a fern case, or outdoor rockery, when once established.



GROUP OF SCOLOPENDRIUMS ON ROCKWORK.

## CHAPTER XV.

HARDY FERNS (*continued*).

**T**HE preceding chapter contains nearly all the dwarfer-growing hardy ferns suitable for your purpose. So now, dear readers, we will briefly notice the larger-growing species. They are all very handsome, and being the most common, they are generally the easiest to get. The male fern, lady fern, and mountain buckler fern especially, you will find in great abundance all over the country. In moist woods they attain great luxuriance, adding greatly to the charms of the sylvan shades, with their graceful feathery plumes.

*Lastrea Filix-mas*.—The male fern, or common buckler fern, is a very robust-tufted growing species. The fronds, which are produced from a crown, rise from one to two feet in height, supported on densely scaled brownish stipes, and are broadly lanceolate in shape, divided, the divisions in pairs along the rachis or midrib, and very regularly deeply lobed or cut. It is of easy cultivation.

*Cristata* is a notable variety of the species, of a curious, handsome habit, having the points of the divisions and fronds fringed and tasselled.

*Lastrea oreopteris*, or mountain buckler fern, is

much like the preceding species. The fronds rise to the height of from one to three feet, in a circular fashion, from a crown. It occurs abundantly in woods and heathy commons. It has one great peculiarity, being very fragrant if bruised or drawn through the hand, and is of easy cultivation.

*Lastrea æmula*, or hay-scented buckler fern, is an elegant moderately sized plant, of a tufted circular habit of growth, the fronds rising from a crown. They are divided and subdivided, the lobes round the margins of the divisions recurve inwardly, giving the entire frond a peculiar crisped appearance. The fronds are triangular in shape, and the entire plant has an elegant drooping habit, and is evergreen. Its moderate size makes it a good pot plant. It is found in Ireland and the western parts of England.



ATHYRIUM FILIX FÆMINA, VAR. FRIZELLÆ.

*Athyrium Filix-femina*, or Lady Fern, is the most handsome and graceful of all British wild ferns. No

one among them can equal its exquisite beauty of outline. It is of a tufted habit of growth, the fronds rising in circular fashion from a crown, and varying from one to four feet in height, according to situation, appearing in April or May and dying down with the first frost of autumn. They are broadly lanceolate in shape and divided; the divisions also lanceolate, subdivided, and more or less lobed round the margins, which are sharply toothed, giving the entire plant an exquisite gracefulness of outline.

It is a splendid plant for a pot when a large specimen is required, and is the easiest of all the British wild ferns to cultivate, requiring plenty of room and moisture.

Among the many varieties of the Lady Fern *multifidum*, *crispum*, and *Frizellæ* (see illustration), are among the best.

*Polystichum angulare*, or the soft prickly shield fern, is a very common fern in some localities. It is a very strong-growing species of the shield ferns. The fronds, which rise in a tufted circular manner from a crown, vary from two to four feet in height, are lanceolate in form and divided, and supported by shaggy, chaffy, brownish scaled stipes. The divisions are also lanceolated and divided into neat prickly toothed, shield-shaped pinnæ or leaflets, darkish green in colour. This fern is nearly evergreen, the fronds remaining green through a moderate winter till the young fresh ones appear in spring.

As a large specimen for pot or rockwork, it is a very desirable fern of very easy cultivation.

*Cristatum* is a curious and beautiful variety, the points of the fronds and divisions being tasselled and crested much like the crested male fern.

*Polystichum aculeatum*, or common prickly shield fern, is very like the preceding, only it has a more rigid habit; the pinnæ or leaflets are smaller, of a dark shining green and of harsh rigid texture. It is much commoner than *P. angulare*, being met with almost everywhere and is also nearly evergreen, remaining green through moderate winters in moist situations. It is very easily cultivated and makes a good pot plant when large specimens are required. It does well in rockwork.



GROUP OF HARDY FERNS.

## CHAPTER XVI.

## GREENHOUSE FERNS AND MOSSES.



OUR list of suitable ferns for window gardening would not be complete without a few of the hardier greenhouse species and varieties. Those of my readers who have a miniature greenhouse can grow many of the hardy greenhouse ferns very well if care be taken to keep them properly watered and shaded from the sun's warm rays. Ferns, as a rule, do not love the sunshine, thriving best in moist, shady places. This should be borne in mind by my readers. Try, therefore, to supply your Ferns with the necessary shade and moisture, and there is no fear of your being unsuccessful. The most preferable way of growing them, especially the dwarf tender species, is in a Wardian case. But very good specimens can be got up in a pot in the window, if a Miniature Greenhouse or Wardian case is out of your reach.

It will be quite unnecessary to enter into details regarding the distinctive marks and habits of the few Greenhouse Ferns I shall select. I shall merely draw up a short list of the varieties considered suitable for your purpose, from which you can select at pleasure.

They can all be procured from any respectable nurseryman at moderate prices.

*Adiantum cuneatum* and *Adiantum formosum* are two favourite Maiden-hair Ferns found in all Greenhouse collections; also *A. pedatum*.

*Asplenium attenuatum* and *Asplenium bulbiferum* are two excellent Greenhouse spleenworts, *A. bulbiferum* especially being a handsome plant found in all collections. *A. flabelliforme* is also excellent.

*Platycarium alicorne*, the curious Elk's horn Fern, has the true appearance of an Elk's horn.

*Davallia canariensis*, or the Hare'sfoot Fern; the creeping stems of this curious Fern are very massive and hairy looking, having just the appearance of a Hare's foot. *D. alpina* and *D. elegans* are very good.

*Pteris serulata*, a graceful favourite Greenhouse Fern. *P. s. variegata* is a variegated form of the above.

*Pteris serulata cristata*, is a crested variety of the above, and quite a gem.

*Pteris cætica albo lineata* is a beautiful variegated Fern, and an excellent variety for pot culture.

*Pteris tremula* is a strong-growing triangular fronded Fern, rather like the common bracken, though finer in form. A capital plant for pot culture from its readiness to grow. Also *P. ternifolium* (see illustration).

The Mosses or Selaginellas of the Greenhouse are beautiful subjects for window gardening. The common Greenhouse moss, *Selaginella denticulata*, especially, might grow in several patches among the gravel or sand on the floor of your miniature greenhouse, and would add an extra charm to the general effect. A



**DAVALLIA CANARIENSIS.**

little bit in the Flower or Fern pots if not allowed to spread over the surface, to exclude the air, looks very interesting, and a pot or pan filled with it, or the variegated variety, looks very neat and pretty, and makes a tasteful centre for a table when grown into a dense mass. To propagate the *Selaginellas*, or



*PTERIS TERNIFOLIUM.*

mosses, you only require to take a few points of the plant, and insert them over the surface of the pot. They take root easily but require to be kept damp, and shaded from too strong light and sunshine.

There are a good many of them that would suit window gardeners, but besides the two I have mentioned, *S. denticulata* and *S. denticulata variegata*, there are only three others I will recommend. *Selaginella cæsia*, or the blue-shaded moss, which looks beautiful suspended in a pot having a trailing habit; *Selaginella stolonifera*, a very pretty pot plant; and *Selaginella Willdenovii*, which sums up the whole list. There is no doubt but you will be able to make a very suitable selection of Ferns and Mosses from the list I have drawn up, and with proper attention to watering and shading I am sure you will be successful. The cultivation of Ferns has a peculiar charm for some people, and there is much to be said in their favour, for there are always the charms of grace and beauty to delight the eye in their presence before us.



RUSTIC JARDINET WITH FERNS.

## CHAPTER XVII.

## PLANT-GROWING IN WARDIAN CASES.



THE Wardian case is one of the great inventions of modern times, called forth by our increasing love for flowering plants and ferns, and a very good illustration in itself of the height of perfection to which we have arrived in the art of plant-growing. With their aid we can now have a selection of our favourite plants as our daily companions in our rooms, always beside us to be admired and made much of, and the objects of our daily care and attention. Situated thus they become, by-and-bye, part and parcel of our very existence, associated with the love of our friends and companions and ranking among the necessary requirements of our homes. We hail with pleasure the appearance of a fresh bud and the unfurling of each tiny, tender leaf. Day by day, and week by week, we mark with patient hope the rate of progress every shoot is making, till at last, oh, joy of joys, the flower bud appears, and ere long displays to our delighted eyes the long-hidden charms of rich and gorgeous hues and fairy forms of which we often dreamed. Thus, they weave around the heart a host of tender associations, ever dear to the memory because of the loved

ones who may have passed away, or parted from us for awhile, leaving us the remembrance of the busy hands and loving voices that made life so pleasant for us in the past in helping to tend the pretty flowers now left as a sole remembrancer of their once happy presence. Every plant in our home will have its own history, its own pleasant associations. Every bud, leaf, and frond will be dear to us, having watched them forming one by one and expanding in the light.

The most successful and interesting way for amateur cultivators to grow ferns is by means of the Wardian case. In it they can either be grown in pots or planted out on rockwork. The moist atmosphere and protection they enjoy when grown under glass is the nearest assimilation to their natural requirements to which we can attain. Under a case, if proper care and attention be bestowed on them they develop their natural graces to a greater extent than when growing in their wild state. Many other plants can be grown in conjunction with them, giving an interesting variety to the general arrangement.

I remember once being sent to rearrange a Wardian case for a lady. Some fresh Ferns were to be added, and others shifted into bigger pots, but what took my attention more than anything was a luxuriant plant of *Stephenotis floribunda*, the very picture of health, covering the entire roof of the case in many twining folds. The Ferns and mosses underneath it seemed to enjoy the shade provided for them by their robust neighbour. I was told the *Stephenotis* had never once flowered, although it had been in the case for some

years. Doubtless the confined space had prevented it setting flower buds, but it was a beautiful plant even without flower.

Of the many plants that can be grown with advantage in conjunction with Ferns, the *Tradescantia zebrina* is among the very best. It has a low creeping growth, with smallish oval-pointed leaves which clothe the stems in pairs, each leaf being prettily silver-grey, green, and brown striped, and having small pinkish flowers at their axiles. It cannot fail to be a favourite with all who grow it. The *Calla Ethiopica*, with its large handsome green leaves and white trumpet-shaped flowers, makes a grand centre-piece; and the smaller growing *Caladiums*, with their gorgeously coloured leaves, give a charming diversity to the whole arrangement. The feathery palm-like foliage of the *Bambusa* looks very pretty, rising rigidly among the Ferns, which they seem to rival in gracefulness. The pretty silver variegated stove grass, *Panicum variegatum*, is another little gem; a little bit planted out in the rockwork soon grows away. A plant of the variegated coltsfoot grass, *Dactylis glomerata*, is a nice companion for it. The ivy-leaved *Geraniums*, green and variegated, and *Lobelias*, and several other plants, all thrive under the same treatment given to Ferns and mosses, and help to make up a truly grand case of plants.

All the wild British Ferns described in a former chapter do well in a Wardian case in your room. The most desirable Greenhouse Ferns to grow in conjunction with them besides the ones described in a former chapter are the following. The figures following their

names do not represent their full natural development, but rather the length they generally attain when under cultivation in a closed glazed case. They are nearly all evergreen.

|                                      |                |
|--------------------------------------|----------------|
| <i>Acrophorus hispidus</i> . .       | 6 to 12 inches |
| <i>Adiantum cuneatum</i> . .         | 6 „ 12 „       |
| „ <i>reniforme</i> . .               | 4 „ 8 „        |
| <i>Asplenium flabellifolium</i>      | 12 „ 18 „      |
| <i>Blechnum occidentale</i> .        | 12 „ 18 „      |
| <i>Campyloneuron repens</i> .        | 5 „ 10 „       |
| <i>Cystopteris bulbifera</i> .       | 10 „ 12 „      |
| <i>Davallia parvula</i> . . .        | 5 „            |
| <i>Lomaria Germanii</i> . . .        | 9 „            |
| „ <i>gibba</i> . . .                 | 6 „ 18 „       |
| <i>Lygodium japonicum</i> (climbing) |                |
| <i>Platyserium alicorne</i> .        | 6 „ 18 „       |
| <i>Woodsia obtusa</i> .              |                |

The proper position for a Wardian case is where the sun cannot reach it, a few minutes' strong sunshine being enough to shrivel up the tender fronds of the Ferns. They should always be kept cool and moist, during the summer especially. This can be done by shading them if the light is strong, and giving them a vapoury sprinkling now and then during the day, and leaving the top of the case loose so that a gentle circulation of air may be kept up, allowing just a little more ventilation during night hours in summer time to keep the plants cool. Never have the case altogether closed; always make provision for a gentle circulation of fresh air. A Fern should never be allowed to suffer



WARDIAN CASE FOR FERNS AND SELAGINELLAS.

for want of water, but during the winter months, when all plants are comparatively at rest, less moisture and watering will do. As a rule, Ferns can hardly be overdone with moisture at the roots all through the growing season, as long as no stagnant water is allowed to lodge about them. You should always make sure, therefore, that the drainage is ample and in good working order.

The soil most suitable for the rockwork inside the case is the same as recommended for pots; that is, roughly broken peat earth and silver sand in equal parts, with a small proportion of sandy loam added. If you go to any nurseryman he will give you the proper soil you require if you tell him for what purpose you want it. It is better to do this than to mix up your own compost, and you are sure of getting good soil ready for work at once. When arranging your rockery make up a heap of this soil and place your burrs or rocks in a natural easy style over it. There will be no difficulty in planting your Ferns and mosses afterwards; you can just displace a stone to allow of that being done, and replace it again. In this you will have an opportunity of displaying your good taste and skill as a plant-grower. The neater the arrangement the more credit will accrue to you, and remember that you should never give your Ferns manure water, as I recommended for flowering plants; they do not care for it.

The Wardian case can either be placed on a stand or table in your room, on stair landings or in halls and vestibules, or fitted up in a window recess in connection

with the lower sash of the window, and treated much in the same way as the miniature greenhouse. There are a great number of lovely plants not hardy enough to grow in the miniature greenhouse which can be grown to perfection in a Wardian case inside your room, where they will have the benefit of the warmth kept up for your own comfort; and one of the great points in favour of a glazed case is that your plants enjoy a nice moist atmosphere in the arid temperature of a room, and are completely protected from the poisonous effects of gas which would quickly destroy them if not enclosed.

A truly grand case of flowering and foliage plants alone can be made up out of the following list. They are all of easy management and require a soil to grow in composed of nearly equal parts of peat earth, leaf mould, and turfy loam, with a good proportion of silver sand added: *Allamanda grandiflora*, *A. Schottii*, *Achimenes* of sorts, *Gloxineas* of sorts, *Gesnerias* of sorts, *Gesneria Oxoniensis*, *Hoya bella*, *Kalosanthus* of sorts, *Caladiums* of sorts, and *Begonias* of sorts.

Of serviceable hardy Orchids we have *Cypripedium barbatum*, *C. insigne*, *C. venustum*, *Dendrobium nobile*, *Oncidium barbatum*, *O. flexuosum*, *Trichopilia coccinea*, *Lycaste Skinneri*.

And for climbers we have the lovely *Kennedya*s of sorts, and *Stephenotis floribunda* and *S. profusa*, a very free-blooming variety for pots. The *Hoya bella* also makes a lovely climber. A very nice way to raise Palms is to sow several stones of the dried dates of shops in a pot inside your plant case. They soon

grow and make nice specimen palms in the course of time.

A selection from the above list, with the addition of a Geranium or two, a Fuchsia, and a pot of Lobelia would be a very good arrangement. A case of this kind for flowering and foliage plants requires plenty of air throughout the day and to be kept nearly close at night to protect the plants from gas. Airing must always be given from the top of the case, which should be moveable to allow you to lift it up an inch or so at a time. Pot plants in a case require plenty of water during the summer season when they are growing, but during the winter months they should be allowed less, as all plants are then in a passive or resting state, unless when forced unnaturally into growth by means of heat. The inmates of your plant case should have a sprinkling over head in the morning before the sun shines on them with tepid water, and the same in the evening when closing the top.

Of course, as plants grow they will tend to get crowded in the case and then you should either prune some of your specimens, or take one or two of the hardier sorts out to give room to the rest. It never does to crowd plants either in a case or miniature greenhouse, or when standing in pots in the window. A few plants well grown are better than a crowded mass of sickly ones.

The bottom of your plant case can be laid with soil and gravel, and *Selaginella denticulata* and other mosses planted over it, which you can arrange in such a way that the flower-pots may be partly hidden. Some of

the Echevarias, Semperviviums, Sedums, &c., could also be brought in with advantage; and two or three select Ferns, if you wished them, included, would complete the arrangement. The climbers I have noted should be run up the sides and trained along the roof with copper wire; trained in this style they do not interfere much with the plants below and afford at the same time a grateful shade. They will require a good deal of pruning and training as they grow to keep them from getting too dense. Order and cleanliness



HOME-MADE WARDIAN CASE.

are two most essential things for the health and well-being of the plants. They should be watered periodically, and all decaying flowers and foliage removed, and the glass and pots kept quite free of the green vegetation so liable to take place in such structures.

This and the following chapters aspire to the higher style of window gardening and floral decoration. I have no doubt that many of my readers will not be able to follow out the suggestions I am giving; still at the same time they may pick up useful hints which

they may turn to advantage. It is quite easy if you have the necessary materials to construct a Wardian case for yourself, at considerably less outlay than you would have to make in purchasing the elegant ones sold by the dealers (see illustration). A neat zinc bottom in the form of a box of the size you wish your case to be, with narrow strips of zinc led up from the corners and soldered together double, with binders from corner to corner in the same way, and the glass put in between the double strips and joined closely with putty, would make a very good Wardian case. The glass should be very thick, and the top fastened with two hinges. The zinc should be painted neatly. A plant case should have a perforated false bottom to allow surplus water to drain away, and the bottom fitted with a small tap to draw the water off. The neglect of this point is the ruin of many plant cases.

Those of my readers who are able to follow out the suggestions I give in this and the following chapters, if they have not given much thought to plant-growing in their rooms before, will soon be as enthusiastic as the keenest old veteran in the art. There is an absorbing interest in this lovely and innocent pursuit that captivates the hearts of young and old.



WARDIAN CASE.

## CHAPTER XVIII.

### FILMY FERNS IN CASES AND UNDER BELL-GLASSES.

**T**HIS is a class of Ferns well deserving a chapter all to themselves ; their delicate membranous texture and love of shade and moisture requiring a mode of cultivation altogether different from the other kinds of ferns. Their fronds when held up between the eye and the light appear so delicately transparent that their simple internal structure is revealed to the naked eye more clearly than in any other kind. They cannot be cultivated in rooms unless in a close, well-made case. The Warrington case I consider the most preferable. It differs from the Wardian case in having the lower part filled with water combining a Fern case and Aquarium in one. The presence of water in the lower part causes a steady moist atmosphere which Filmy Ferns naturally delight in (see illustration). It is only in a case of this description that they feel at home. In their natural haunts they love to creep among the dripping rocks near a waterfall where shade and constant moisture is kept up ; so unless you can contrive to keep up the same conditions of atmosphere there is little chance of your being successful in their cultivation. They are so thin and delicate that a few minutes' sunshine or dry air causes them to



HARDIAN CASES.



*Filmy Ferns in Cases and under Bell-glasses.* 129



A WARRINGTON CASE WITH FILMY FERNS.

### 130 *Filmy Ferns in Cases and under Bell-glasses.*

shrivel up and die. Still a fair amount of light must be allowed as long as the sun does not reach them.

I do not think there is anything in connection with window gardening of such absorbing interest as the cultivation of these beautiful Ferns, and any one may well be proud if successful in growing them as they should be grown, for they are extremely beautiful and interesting.

A Warrington case being partly an Aquarium, it is necessary to raise above the water small rocks and islets of burrs or artificial stone, having hollow crevices filled with soil in which the plants may grow. Other suitable rests may rise from the bottom on which to stand pots and earthenware baskets. Pots and baskets hanging from the roof and earthenware baskets at the sides complete the internal arrangement. But here let me impress upon you the absolute necessity of having ample drainage at the roots of your plants, and always in good working order, to allow the water to percolate freely away through the soil, for though *Filmy Ferns* require moisture as a necessity of their lives, they cannot endure the evils of stagnation. In fact, if the drainage at the roots is ample and good they cannot suffer from excess of moisture. A dry atmosphere is their death warrant; there is nothing that will hurt them sooner. Used to the damp, dark crevices of rocks, where the sun never shines and the drought of summer is never felt, they perish at once in a dry atmosphere; and even if relieved in time to prevent their death they are robbed of their beauty for an entire season, their beautiful membranous fronds shrivelling

up as before the breath of a furnace. Sunshine is nearly as disastrous in effect as drought, a few minutes of a warm sun being sufficient to scorch them up.

In hot dry weather they should have several vapoury sprinklings of tepid water during the day. In cloudy weather, when the circulation of air is less active, one or two sprinklings will be sufficient. Syringing should never be attempted in their case; a light vapoury sprinkling or dewing is the proper thing, and a small watering-pot with a very fine rose will do it nicely.

The same soil as recommended for Ferns in the previous chapter suits the Filmy Ferns well, but lumps of sandstone should be added, as they love to cling with their roots around the stones. Some of them prefer clinging moss-like to open porous blocks of sandstone, or lumps of charcoal, to growing in prepared soil. In potting them in pots or planting them in earthenware baskets, never neglect to give them plenty of drainage. One large crock over the drainage hole and a handful above it, with some sand knobs added, and a largish lump of sandstone in the centre for the roots to cling to, will be sufficient. It is a very good plan to cover the drainage with a little moss before putting in the soil, which will prevent the water from washing the soil down into the drainage and choking it up.

Under bell-glasses the Filmy Ferns thrive very well if the same attention be paid to them as when in the Fern case, for it acts on the same principle. A large earthenware pan is the proper thing to choose,

132 *Filmy Ferns in Cases and under Bell-glasses.*

with a bell-glass to suit. The Ferns should be planted out in the same soil as that recommended for case ferns, with several largish lumps of open sandstone for them to cling to, and to aid the drainage which must be ample and properly put in. Before putting the soil into either pots or pans examine it well in case



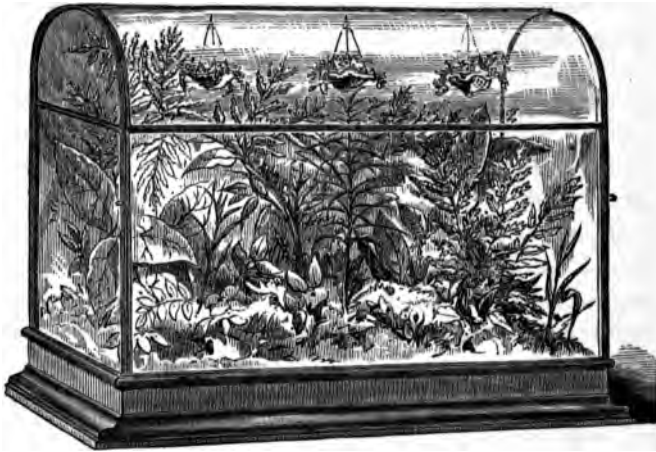
SECTIONAL VIEW OF PAN AND BELL-GLASS FOR FILMY FERNS.

small worms or other vermin may be lodging in it. They cause much mischief if allowed to remain.

Cases and bell-glasses require very little ventilation. A small hole in the knob of the bell-glass is sufficient, while for the case if the top glass is put loosely in the small quantity of air admitted through the crevices will cause quite sufficient circulation. Never give any air by the bottom of the case or bell-glass, for air given that way causes chilling draughts; always give air by

*Filmy Ferns in Cases and under Bell-glasses.* 133

the top when you do give it. Air need only be admitted once a month, and watering may be done at the same time, which is often enough. All you require to do is to take off the top of the case, and during the time you are watering and wiping with a cloth the inside of the case all round, sufficient air will have been admitted. The water you use must be soft and of about 70 degrees of heat. A very good way to



**CASE OF PLANTS AND FILMY FERNS WITH HANGING BASKETS OF SHELLS.**

water pots and pans with Ferns is to immerse the bottom in water for two or three seconds, and the water will then ascend by capillary attraction through the entire ball of the plant and a more decided watering will thus have been secured. Some advocate keeping Filmy Ferns entirely closed, but that idea is erroneous, especially in the management of the Warrington case.

### 134 *Filmy Ferns in Cases and under Bell-glasses.*

A gentle circulation of air must always be provided for them, especially when the temperature is low, owing to the great amount of moisture in the atmosphere caused by the presence of water.

As the Warrington case is the very best structure for growing the British and foreign Filmy Ferns, a choice list will enable my readers to select the best for their purpose. The *Hymenophyllums*, *Trichomanes*, and *Todeas* are the special favourites. Some of the New Zealand and American kinds are very lovely, though they are seldom seen in the hands of amateur cultivators, although the same treatment required for the commoner kinds, such as *Hymenophyllum Tunbridgense* and *Trichomanes radicans*, will suit them very well. Of the *Hymenophyllums* we have—

*Hymenophyllum Tunbridgense*, choice British species found in the neighbourhood of Tunbridge Wells; hence its name. It has a matted tufty creeping growth, the fronds being from one to six inches long and of a dull brownish green.

*Hymenophyllum unilateral*, another British species, of a dense tufted growth, the fronds averaging from two to four inches in height and brownish green in colour. These are the only wild British Filmy Ferns and are always found together.

*H. caudiculatum*, with large light green fronds.

*H. chiloense*, an exquisitely beautiful, small, densely tufted species, with yellowish-green fronds.

*H. flexuosum*; this species is as like a *Selaginella* as a fern; it has lovely crisped wavy fronds.

*H. pulcherrimum*, a New Zealand species of a large

and strikingly handsome appearance; the fronds are elegantly divided and of a yellowish-green colour.

*H. fuciforme*, a native of the island of Juan Fernandez, of Robinson Crusoe celebrity. It has beautiful pale bluish-green fronds, and is considered the finest of the genus.

Of the *Trichomanes*, the only British species is *Trichomanes radicans*, which we noticed in a former chapter. Both it and its variety, *T. Andrewsii*, are excellent ferns for the Warrington case. Among others we have *T. scandens*, a grand climbing fern, excellent for covering a piece of rockwork. It has large elegant yellowish-green fronds.

*T. reniforme*, a very distinct species of great beauty, with large kidney-shaped entire fronds.

*T. venosum*, an extremely beautiful fern for a case.

But the loveliest of all Ferns, the beauties of which surpass the power of pen or pencil to portray, is the *Todea superba*. Nothing can surpass the extreme beauty and sumptuous appearance of this Fern. No fern-grower should be without it. I consider it as the highest point of honour in fern cultivation to have the credit of possessing a well-grown plant of this Queen of Ferns in a case. Next to it stands *Todea Hymenophylloides*, commonly known as *Todea pellucida*, a New Zealand Filmy Fern of great beauty, and nearly hardy enough to stand outside during a very mild winter. It is a recognised favourite with all fern-growers, and very distinct from any other kind of Fern.

*Todea Barbarea* is also a very desirable Fern, free-growing and of easy culture.

136 *Filmy Ferns in Cases and under Bell-glasses.*

*Todeas* are not creeping Ferns like the *Hymenophyllum* and *Trichomanes* ; they are really tree ferns and require more soil to grow in, of an open peaty nature, to allow them to develop their luxuriantly beautiful fronds.

Along with the Filmy Ferns several other species of Ferns, that love shade and moisture, may be grown with advantage, such as the *Adiantum capillus-veneris* for instance ; also some of the Selaginellas, such as *S. denticulata*, *S. helvetica*, and *S. Martensii* may be grown as a variety to the general arrangement, but do not let the mosses get unruly ; keep them within bounds, so that they may not choke or interfere with the Ferns.

The Australian Pitcher-plant (*Cephalotus follicularis*), the Side-saddle plants (*Sarracenia*), the Fly-trap plants, and many other curious plants, may be grown with advantage along with the Filmy Ferns.

The cultivation of Filmy Ferns may be summed up in a few words. Give them plenty of moisture ; keep them nearly close, allowing the air to circulate only through the open crevices at the top of the case, which must be loosely put on ; give them plenty of drainage and never allow the nearest approach to stagnation to take place ; keep them from sunlight and give them the benefit of a little shade when the light is strong ; and give water and admit air periodically as they require it. You can always admire their exquisitely delicate and transparent forms of growth without the necessity of handling them. They cannot stand handling, but they will stand any amount of admiration through the glass walls of their humid little dwelling.

## CHAPTER XIX.

### POT PLANTS FOR WINDOWS, AND THE LABELLING OF SPECIMENS.



AM well aware that a great many people have not the opportunity or the means to possess a miniature greenhouse or Wardian case, but that need not prevent them from indulging in their love for pot-plants as long as they have a window. Many a splendid specimen plant may be seen in the Cottager's windows rivalling in health and beauty the favoured inmates of the greenhouse.

In places such as London and other large cities, where window gardening has become so fashionable, a great variety of plants are grown, but in country towns and villages few seem to rise above the ambition of a Scarlet Geranium or Fuschia. It is a great pity this should be when there is so great a variety of plants as easily grown and quite as cheap. The red China Rose for instance makes a grand window plant, when in bloom, and just as good if not better is the green and variegated *Hydrangea Hortensis*, with its immense head of bloom, which lasts for months. Gems of the first water for pot culture are the hybrid *Begonias*. *Begonia Dregsi* is dwarf and compact with green foliage and a profusion of snow white flowers; *B. Sandersonii* and *B. insignis*, are the best pink flowering kinds;

*B. lucida* and *B. manicata*, the best with rose-coloured flowers. Then there are the Myrtle, and Calla Ethiopica or Lily of the Nile, and in fact all the plants and spring flowering bulbs recommended for the miniature greenhouse. I will also add several very desirable greenhouse plants, purposely kept out of the list, owing to the great height they soon reach, making them scarcely fit for the miniature greenhouse or plant case. First we have the *Acacia Armata* or prickly Acacia, an excellent pot plant for windows; then the *Abutilon striatum*, and *A. Thomsonii*, and the white flowering variety, *Bircle de Neige*; they have heart-shaped foliage and lovely bell-shaped flowers. *A. striatum* has variegated foliage. The *Deutzia gracilis* is a pretty pot-plant with drooping white flowers. *Cytisus racemosus* has a profusion of yellow pea-shaped flowers, and much like it in flower but larger in foliage is the *Coronilla glauca*. Very good for window culture are some of the dwarfer growing *Chrysanthemums*; they flower in autumn and should be grown outside, plunged in a border up to the rim of the pot till the flowers begin to open; then taken inside and placed in the window to flower. They require abundance of water always. After flowering they should be cut down and shaken out of their pots and the roots separated; you can then select as many nice little pieces as you may require to pot again for next year; keep them indoors till spring is advanced, and then plunge them in a border as before. *Clematis Jackmanii* and other varieties of hardy Clematis make excellent window climbers grown in pots or tubs, and trained as

they grow round the window. They can be grown either inside or outside, though outside is preferable. They require to be cut down every year and fresh soil given. They have a splendid appearance when in flower around a window. *Ivys* are grand window climbing plants. The *Golden variegated Ivy* especially is quite a gem for the purpose. The *Scarlet honeysuckle* and the *Virginian creeper* are also very good window climbers.

Rustic brackets may be designed and placed on the walls of the window recess to hold flowering plants. The most suitable plants for them are the *Saxifraga sarmentosa* or Aaron's beard and *S. Fortunii*, the blue and white *Lobelias*, Ivy-leaved *Geraniums*, *Musk plant*, *Creeping Jenny*, *Tradescantia zebrina*, and any other hanging plant that would droop over and hide the pot.

I can fancy how beautiful a window of this description would be with several nice pot plants on the sill; a *Clematis Jackmanii* blooming gaily over-head, other climbers up the sides, and a hanging basket both within and without the window well furnished with hanging plants, and pots of blue *Lobelia* or *Musk* on the side brackets, all combining to form a beautiful and harmonious picture which would be a pleasure to every beholder. This can all be done with very little expense it only requires taste and patience to work it out. The expense and trouble are nothing to the pleasure you will experience.

There is one little thing in plant growing which you should always be particular about, that is, the correct labelling of your plants. Although you should have

their names correctly in your memory, it is always the proper thing to have them legibly written on a label and stuck in the side of the pot, immediately between the pot and ball. A piece of lath or white deal not above three fourths of an inch in width, cut into a neat shape and six inches long, pointed at the end for insertion, with the sides smoothed to write upon makes a capital label. Before writing on it give it a very thin coat of white paint, this makes the pencilled name stand out clear and prevents it from being obliterated. The name should always be written down the label in a plain round hand and in two lines if the name be lengthy. Of course wooden labels will soon decay at the inserted ends and have to be renewed; to avoid this an imperishable label can be made of zinc, cut into the same shape. This you may write upon with ink. There is an indelible ink that never fades sold by the seedsmen for this purpose; you can also purchase from them Yeate's No. 15, or Erfurt potting label made of zinc, just the label you require, for 2/ per 100. There are several other styles of Yeate's suspending and potting labels to choose from. And you can purchase the common wooden pot-labels at sixpence per 100, neater made I daresay than you could make them yourself, and the trifling outlay would save you the trouble of making them.

A very neat way of labelling plants is by means of small zinc or wooden labels with only a number written on them corresponding with the number entered in a little book, giving the botanical name of the species and variety, with the commoner name it may be known

by, and the day and date when the specimen first came under your care, and any other little details connected with it you may wish to remember. A little historical book of this description is most interesting, both to yourself and your friends. Under the heading of this or that fern, for instance, you may have reminiscences noted down of some past holiday spent in some of the lovely spots among the hills, valleys, woods and streams of the glorious open country; a holiday that has left the mind full of happy incidents that will crop up in your sleeping and waking dreams for ever after.

The rarer kinds of Wild Ferns are generally found in secluded and sometimes almost inaccessible localities. There the rambling tourists often commits wanton destruction, unthinkingly pulling up the rare and beautiful little Ferns in handfulls to please a passing whim, or to have remembrances of their visit to the locality. Ten to one the poor Ferns perish, their spoilers having no idea how to take care of them. If they are still fresh when they reach home they put them into a pot, in any sort of way, where they die the slow death of starvation and bad treatment, and then are thrown out as useless. I would advise such people to let the poor Ferns grow in their own quarters. It is useless to pull them up unless they know how to treat them well and are willing to do it. A few fronds preserved and dried would suit their purpose just as well, and leave the locality no poorer in its rare possession. Skilled Fern cultivators will know how to gather a rooted specimen without unduly destroying more than they take away.

## CHAPTER XX.

## BALCONY AND AREA GARDENING.

**B**ALCONY and area gardening has become very fashionable of late years in some parts of London, and others of our large towns. The art is only in its infancy with us as yet, but by-and-bye instead of being confined to a few streets and squares, we shall see the balconies and windows everywhere draped with verdure and gay with countless flowers of every hue. On the Continent this style of town gardening is carried out to a far greater extent and in greater perfection than with us. Of course our climate will never allow us to compete with our continental neighbours with anything like success in this matter, but still, a very great deal more might be done. A roomy well arranged balcony with its little rockery, flower-pots, and boxes and creeping plants is one of the best, cheapest and most enjoyable of town gardens, a never failing source of pleasure and a very oasis in the desert of town life for the wearied eye to rest upon. It is surprising how flowers and plants will flourish in a balcony or area garden if suitable plants be chosen and well supplied with water, both at the roots and overhead. A daily syringing or overhead

watering with a fine rose is one of the necessary attentions to be paid to them in this situation. Without



A BALCONY GARDEN.

this daily washing your balcony or area garden soon gets dusty and unattractive. In the morning before

the sun is very strong is the proper time to do it. In dry warm weather the plants should all be watered at night after sundown. It is very refreshing to them after a hot dusty day, and braces them up for the coming morrow.

The best way to cultivate flowers on a balcony is by means of boxes, which are preferable to pots, as they do not dry up so soon, and the roots of the plants have more nourishment and room to spread. The best sort of soil is the same as that recommended for Window boxes. And no lack of useful flowers need be experienced for nothing looks better on a balcony than some of our hardy common flowers which may be bought in the market for a few pence per dozen, such as, *Wallflowers*, *Stocks*, *Arabis*, *Daisies*, *Hepaticas*, double and single *Primroses* and *Polyanthuses*, *Pansies*, *Violas*, *Forget-me-nots*, and *Auriculas*, not forgetting the splendid, hardy border plant so suitable for pot culture, *Dielytra spectabilis*, with its graceful drooping spikes of rosy pink flowers. These are the standard spring flowering hardy plants so fashionable now for Spring gardening. They flower in conjunction with the grand display of Spring flowering bulbs.

Among Spring bulbs we have first the noble *Hyacinth* with its magnificent spikes of fragrant waxy-looking bells, of nearly every shade of colour. You need not purchase the new or costly named sorts of this charming flower. Older sorts for Spring display in masses can be had very cheap, and flower just as well and sometimes better than the costly sorts. The *Tulip* is the Queen of Spring flowers and the grandest

of all for balcony display. Nothing can excel the effectiveness of a mass of its magnificent blooms. They can be had for a few pence per dozen. The *Tulip* is closely followed in the order of merit by the *Crocus*. Every one knows and loves the charming little *Crocus* with its yellow, blue, white and variously coloured flowers. They are very cheap, from 2/6 per 100, so you could have masses of them in bloom on the balcony with little expense, and they make a really gorgeous display in connection with the *Hyacinths* and *Tulips*. There is also the *Polyanthus narcissus*, of sorts, the *Daffodil* and the *Muscarias*; all very good, but not so showy as the gorgeous trio, the *Hyacinth*, *Tulip* and *Crocus*. And last but not least we have the virgin white *Snowdrops*, single and double, the harbingers of of Spring—the firstling of the year—the little friend we all welcome so gladly. All these Spring flowers and bulbs usher in the season of balcony and window gardening with a burst of freshness and beauty. They begin with the *Snowdrops* in February and continue in rotation through March, April, and May, till the summer flowers come in to take their place.

Hardy Spring plants can be purchased in Spring and planted in boxes when you get them. But Spring bulbs should all be planted in their boxes in October or November, and kept in any convenient closet or cellar till the days begin to lengthen out again, when they can be placed in their proper quarters; or better still, if you have any convenient place to grow them in till they are nearly in flower, and they will make a grand display on the balcony at once when placed there.

When planting your bulbs you can arrange them as you intend them to flower, either in masses of each kind in one box, or mixed together. A very good arrangement is to have them in lines *Tulips*, *Hyacinths*, *Crocuses*, or *Snowdrops* alternately ; however, your own taste will guide you in this. Remember to plant all bulbs except the *Hyacinth*, below the surface ; the *Hyacinth* should have the top of the bulb above the surface of the soil.

As the Spring flowers die out the Summer flowers will begin to take their place and cause your balcony garden to have quite a different appearance altogether. Masses of gorgeous flowers, luxuriant creeping plants, and fresh foliage of *Ivy*, *Virginian creeper*, *Clematis*, *Grape vine*, &c., will give it a truly rich and sumptuous appearance.

Summer bedding plants all do best planted in boxes, although you may have several specimen *Geraniums*, *Fuchias*, *Lobelias*, &c., in pots, for moving about handy ; but all small plants in pots either on the balcony or in the window should have their pots plunged in boxes among moss or sand, they thrive far better with their roots protected thus from the sun's heat.

For Area Gardens nothing is better than a few hardy plants, such as *Agave Americana*, *A. variegata*, *A. horrida*, *Aloe Africana*, *Aloe picta* and *A. variegata*, *Yucca aloifolia*, *Y. aloifolia variegata*, plants of *Ivy* in tubs trained on wirework, and such shrubs as *Hollies*, *Laurels*, *Boxes*, *Arbutus*, *Mahonia*, *Aucuba japonica*, *Junipers*, *Yews*, and several other varieties of conifers ;

not forgetting the *Rhododendrons* that are so gorgeous when in flower in the early summer. All these plants and shrubs should be grown in wooden tubs painted green. They are an everlasting decoration, standing all the year round, only requiring the dust and soot to be washed off them by syringing, and never being allowed to get dry for want of water.

In an Area no flowers would do so well as the common *Wallflower*. Seeds of it should be sown, and plants planted, in every spare piece of ground, and at the bottom of the walls. An excellent Fern case could be built in an Area. It has just the amount of shade and coolness required by Ferns. There in a neat glass case, to protect them from dust, they would thrive well.

The *Virginian creeper* and the *Grape vine* should be planted and trained over the Area walls in conjunction with the *Ivy* and *Wisteria sinensis*. The last is an excellent town plant, and though it may not produce its lovely clusters of mauve pea-shaped flowers, still, its elegant drooping branches and pinnatifid pea-green foliage has a very pleasing effect.

The *Virginian creeper*, is the best of all climbing plants for town gardens. It drapes the walls and balcony railings with a dense living green all through the summer, changing after August into different shades of rich brown and fiery crimson. It should be planted and trained over every unsightly gable and bare wall. The common *Grape vine* also makes a capital town plant, contrasting well with the *Virginian creeper*. They should both be planted in the Area

below, and a barrowful or two of good rich soil given them to make a fair start. As they grow they can be trained up the walls, anywhere you wish them to grow. They may also be grown in wooden tubs and placed upon the balcony, where they can be draped along the railings, or trained over the walls, or round the windows. The common *Ivy* is an excellent town climber, ready to adapt itself to all circumstances, covering walls, draping railings, hanging in graceful festoons from baskets, or making trained specimens in pots. Its evergreen leathery textured foliage has ever a warm cheerful look, and should always be grown in conjunction with the *Grape vine* and *Virginian creeper*, which are deciduous, that is, they lose their foliage in autumn. These are the balcony and area climbing plants "*par excellence*." No other climbers succeed so well as they do, although the *Honeysuckle*, *Ayrshire Roses*, *Crimson Boursault Rose*, *Gloire de Dijon*, *Charles Lawson*, and several other climbing *Roses* do very well in towns where the situation is open and airy. The several varieties of hardy *Clematis* can also be had to flower nicely in the same position; as also the *Jasminum officinalis* or common *Jasmine*, and the *Cotonaster microphylla*, having a profusion of reddish berries.

Of annual flowering creepers the best are the gaudy *Nasturtiums*, the pretty canary creeper, *Tropeolum canariensis*, the *Scarlet Runners*, and purple and white *Convolvulus*; to which we may add, though not an annual, the *Lophospermum scandens*, a very good greenhouse trailing plant, suitable for balconies and

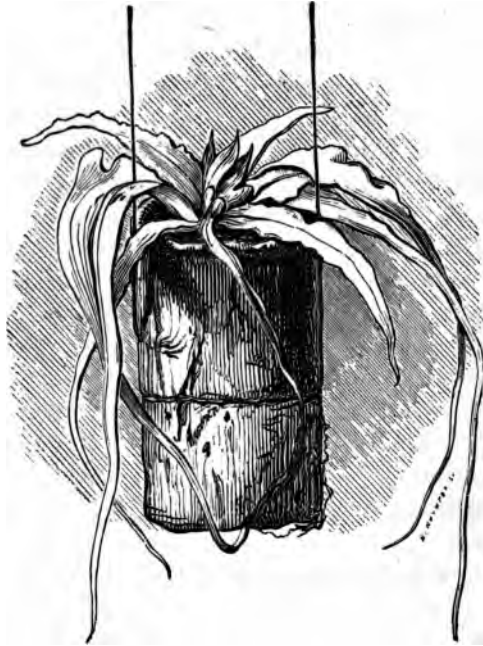
basket work. The others are grand for draping railings, embowering windows, and twining round baskets with wreaths of blossoms and foliage. They require the aid of twine or wire trellis to cling to, and should be sown in boxes of rich soil and have a liberal supply of water.

For large specimen plants for the furnishing of balconies and areas, nothing can surpass the *Rhododendron*, when in flower. Its magnificent heads of bloom, produced in luxuriant abundance, give a balcony a furnished appearance no other flower can come up to. Next to it comes the *Azalea Indica*, one of the greatest favourites for Spring decoration, and the deciduous *Azaleas*, coming into flower in early summer, and very lovely. Then there is the grand family of *Roses* in numerous varieties, the freest flowering and most useful being the old red *China Rose*. During Summer several of the *Palms* and *Cycads* may be placed on the balcony for contrast, and during the winter months *Hollies*, *Aucubas*, *Laurels*, *Boxes*, *Conifers*, *Agaves* and *Aloes*, can be placed to keep it furnished.

As the summer flowers lose their beauty the *Stocks*, *Asters*, *Marigolds*, *Flox Drummondii*, and *Chrysanthemums* will keep up the display till frost kills them down. The *Flox Drummondii* is one of the prettiest and most useful of Annuals for all purposes and the *Chrysanthemums* are the last flowers of the season for outdoors, then only the hardy shrubs are left, and the *Ivy* holds principal sway, draping the balconies with its never dying freshness and drooping in graceful

festoons from hanging baskets, for which purpose it is the best of all plants, remaining healthy and green, through summer and winter.

Hanging baskets for balconies should always be of a



**CAMPTOSORUS RHIZOPHYLLUS.**

good size. Small baskets are nearly useless, drying up quickly and never at all satisfactory. A basket two feet across hanging from the underside of the balcony, and filled with green and variegated *Ivy*,

pegged close round the sides, and a few other flowering plants filling up the centre is just the thing for a balcony. For the winter months when the flowers are dead, a plant of *Aucuba*, or golden or silver Holly in the centre would make it up again for the season.

The basket should be lined with moss to prevent the soil coming through the wires. The *Ivy* roots nicely through the moss when pegged close round and forms a green covering, not only hiding the wires and moss, but protecting the roots of the plants inside from the scorching rays of the sun. Early Spring is the best time for filling a basket, and then you may put a few late Crocus bulbs among the moss; they would flower out from the sides of the balcony basket very prettily. A pot with a small variegated shrub would fill up the centre till the risk from frost is past to allow Geraniums and other tender plants being put in.

It is quite possible to have a small and interesting rockery on a balcony. If the floor of the balcony is of stone, a sheet of zinc cut out to the shape you wish your rockery to be, and the edges turned up all round something like a flat box, with a gentle incline to one open corner for the draining away of superfluous water, should be laid on the stone and your rockery built upon it. Where the floor of the balcony is of perforated metal, the sheet of zinc need only be flat to keep the soil from falling through, with several small holes punched through it to aid the drainage and you can then heap your soil for the rockery about it. Very choice burrs, pretty stones, and shells should be chosen, for the rockery must be very select and neat. Several

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small *Ferns*, *Echevarias*, *Sempervivums*, *Saxifrages*, *Sedums*, and small plants of *Aubretia*, and *Linaria*, or any other dwarf plant only should be used, for the space being confined only a little tiny rockery can be got up, and the rock-plants must be in proportion to its size.

The same may be said of the area. A rockery for *Ferns* would thrive there very well, and be a very interesting object to my city readers who seldom have a chance of beholding them in their native haunts. The shade and protection afforded by an area is just the thing required for *Ferns*.

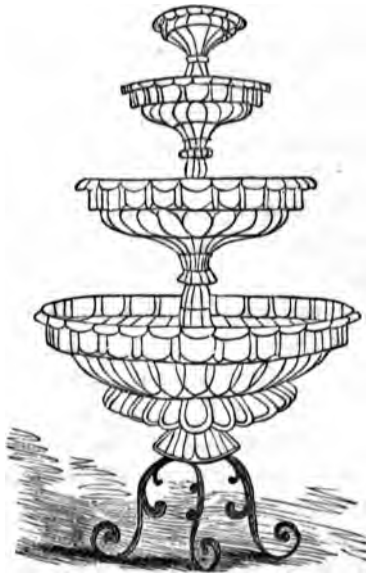
I can fancy a *Fern* rockery built up against the area wall around the root of a robust *Ivy*, where the graceful fronds of the *Ferns* and the pretty little *Linaria* and *Sedums* form a natural rustic bank from which the *Ivy* seems to spring, rockery and *Ivy* forming together a picture of beauty.

The common hardy British *Ferns* are the kinds to cultivate in the area rockery. Always be particular to water them gently overhead every morning and evening during the season.

There are a great many contrivances in the way of Baskets, Brackets, Flowerstands, and Rockeries which a person of some taste and ingenuity can work out. It only requires an imaginative mind, and proper means and appliances at hand to contrive and work out numberless little inventions for the embellishment of town gardens with the lovely flower and foliage plants now so cheap and plentiful.

The principal care of the gardener must always be

that the plants be kept clean and properly watered, for it is truly a miserable sight to see town plants sickly and drooping for want of moisture, and begrimed with dust, as if neglect had claimed them entirely for their own. I do not believe any of my readers will allow their lovely flowers to reach that state of wretchedness.



ORNAMENTAL WIRE-WORK PLANT STAND.

## CHAPTER XXI.

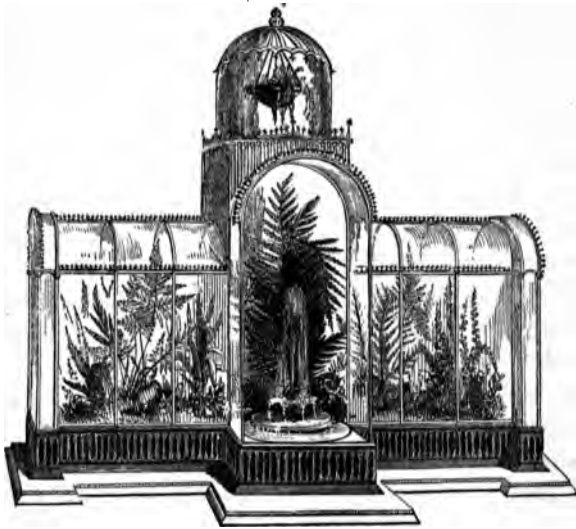
THE FLORAL DECORATION OF ROOMS, HALLS, AND  
PASSAGES.

N the floral decoration of our dwellings a great many ingenious contrivances have been brought into repute. In this chapter I intend to notice a few of them and describe their arrangement and practical usefulness.

The chief of all decorative inventions is the glazed plant case, or Wardian case, fully noticed in a former chapter. The case in various styles we have in our rooms, on our staircase landings, in our halls and passages, full of tender exotic Ferns, hardy Ferns, and flowering and fine foliage plants. The inventions next in importance are the Hanging Baskets, and wall Brackets, Earthenware and China vases, cut flower glasses and screens. They are all used for hanging from the windows, on the walls, standing on stair-landings, in passages and vestibules.

Hanging Baskets are very suitable for the cultivation of many plants having slender drooping habits of growth, such as the *Convolvulus Mauritaneus*, *C. Tricolor*, common *Ivy*, *Linaria* or Toad-flax, *Creeping Jenny*, *Ivy-leaved geraniums*, *Lobelias*, *Saxifrages*,

*Tradescantia zebrina*, and *Selaginella*; and all Ferns, foliage plants, and cut-flowers. They can be obtained of various sizes and materials. Those made of galvanised wire are best, for rust is not so liable to disfigure them as when they are only painted, and they are also light in appearance. Baskets made of earthenware are very



ORNAMENTAL PLANT CASE WITH FOUNTAIN AND HANGING BASKET.

good, but always heavy looking. Very pretty rustic hanging baskets are made from wood and virgin cork. Hanging baskets with zinc boxes fitted inside having a false bottom and tap to collect superfluous water are preferable for in-door decoration. For baskets on the balcony this arrangement is scarcely necessary. They may be of any size for indoors, but for balconies outside

they should always be large and roomy. Very pretty hanging baskets can be made of knots, gnarled tree roots, or pine cones nailed over a small wooden box and varnished. Materials for this style of basket are easily got in the country, and they can be purchased ready made in the towns. An extremely pretty hanging plant stand may be made by drilling holes in the corners of an encaustic tile and fixing wires or small chains, or even twine, through the holes and meeting above, with a hook to suspend it from a nail in the centre of the window recess. On this little stand a plant of *Linaria*, *Convolvulus*, or *Aaron's beard*, can be placed, which will droop down with the prettiest fragile greed wreath imaginable. I have a golden variegated variety of the *Linaria* which is quite a gem for pots or hanging baskets. A very pretty little table ornament can also be made with three sticks of equal length joined to form a tripod and covered with tinfoil. A small basket covered with the same material and suspended from the centre could have a pot of *Selaginella*, *Toad-flox*, *Aaron's beard*, or small Fern placed within it. This is an extremely elegant device having the appearance of a real silver tripod.

Brackets of various designs are greatly used in room decoration, to cover bare walls near windows, and in draping picture frames and mirrors. They are made of earthenware, wood, wire, virgin cork, and zinc. When you wish to drape a picture frame or mirror the zinc brackets should be used and hung at the back of the frame to be concealed from view; in them the common *Ivy* grows well and can be trained in any

form you wish. A very simple contrivance is a copper wire twisted to form a ring at one end large enough to hold the pot just below the rim, with a loop at the other end for hanging it on a nail.

Vases, trumpet glasses, and stands, in terra-cotta, china, and glass, of numerous designs, are extensively



FLOWER VASE FOR VESTIBULE.

used for the decoration of dinner-tables, rooms, halls, stair-landings, and passages. When used in the decoration of halls or vestibules cut-flower vases should be larger in size and different in shape from those used in the decoration of rooms or dinner-tables; many flowers that would have too clumsy an appearance in a drawing-room vase will suit a vestibule vase to perfection, for a

bolder arrangement of details must be aimed at with them to have a good effect.

Miss A. Hassard, a well-known authority on such matters, gives some excellent hints on floral decorations in the 'Floral World and Garden Guide,' which I cannot do better than quote here for your benefit. Speaking of stands in the number for January, 1874, page 6, she says there are only four of the numerous varieties used which she can admire; "for they do not intercept the view, are easy to fit up, and not expensive to purchase. They are as follows:—The true Marchian; the Marchian with trumpet and top tazza; a high, slender trumpet, with three curved trumpets branching from it; and a large tazza with single trumpet rising out of the centre. These shapes when fitted up lightly look very effective;" and, "When going to arrange a stand, see that the glass is well polished, for half the effect depends on the brightness and glitter of the crystal, which sets off flowers to greater advantage than any other material. To keep glass clean it should be washed with nothing but cold water."

It is not necessary that the cut flowers used for decoration should be rare or costly; lovely arrangements can be got up with the hardy garden or common wild flowers, associated with wild ferns, grasses, and many other simple objects of the garden, wood, or field, when the rarer stove and greenhouse flowers are unattainable. As an example of this I quote again from Miss Hassard, page 8 of the same number—a description of "the drawing-room stands to which the first, second, and third prizes were awarded at the Provincial Show of

the Royal Horticultural Society held at Birmingham in June, 1872. The flowers used in the first prize arrangement were white water-lilies, white sweet peas, blue corn-flowers, white rodanthe, ferns, and wild grasses. That of the second prize consisted of pink cactus flowers, white water-lilies, pink and white rodanthe, ferns, and grasses. The third prize consisted of white water-lilies, white rodanthe, and oats. Many of the vases to which no prizes were awarded contained orchids and other choice and costly flowers."

I may also notice another vase composed wholly of wild flowers described by the same lady in the September number of 1874, "and to which was awarded the first prize, in the class for wild flowers arranged for effect, at the exhibition of the Tunbridge Wells Horticultural Society held on July 3rd, 1874. The vase itself resembled a Marchian one in form, and each tazza and trumpet was filled with *Dog-roses*, blue *Forget-me-nots*, brown-tinted sprays of *Oak leaves*, and British ferns; in each tier the flowers and foliage were most charmingly intermixed. In addition to those just named in the trumpet was placed a long trailing spray of *white Convolvulus*, which drooped down and was twined in a most graceful manner. This would make a good centre-piece for the dinner-table as well as a drawing-room vase."

Dinner-table decorations, with cut flowers and fruit, require great taste in their arrangement. They should always be fitted up in a light and elegant style; nothing stiff or clumsy should be allowed. I would advise you to study Miss A. Hassard's articles on this subject in

the January, May, and September numbers of the 'Floral World,' from which the above quotations are made; you will find in them much useful information.

Vases of numerous designs and in various styles in Etruscan ware, terra-cotta, porcelain, glass, and metal, can be purchased from the dealers in any size you require, and the trumpet glasses used for table deco-



ORNAMENTAL PLANT VASE.

ration can be obtained in all sizes from nine inches to three feet in height. Zinc pans, neatly enamelled or painted, are used for protecting the carpet in rooms from water drippings and damp, when large plants, or arrangements of plants are used. For smaller plants requiring to be nearer the light, rustic jardinettes or ornamental flower stands made of wood, wire, or



FERN VASE.



wickerwork, are used with good effect. Ornamental flower stands should always be furnished with a zinc pan inside, to prevent any excess of water while watering the plants dripping down on the floor. Brown or varnished wicker baskets and pot covers are excellent receptacles for pot plants. They should be high enough to conceal the pot entirely, and the surface of the pots should be covered with Hypnum moss. Pot plants arranged in zinc pans and flower stands should always be provided with flats to stand in; the superfluous water collects in them after watering, and is easily removed without causing any overflow or mess of any kind. When arranging pot plants in a flower stand, a very pretty effect is produced by filling all round the pots with damp moss or sand, and placing cut flowers and fern fronds over the surface. This can be carried out in many little ways when abundance of flowers are at hand. For instance, a common small tray or soup plate can be filled with damp sand, and fern fronds and grasses laid round the edge, and cut flowers neatly arranged over them. This makes a pretty table ornament, and is within anybody's reach.

In arranging plants in rooms a great deal of taste is required; in fact, on this depends to a great extent the beauty and usefulness of plants used for that purpose. It must always be remembered that before we get the plants we use in our rooms they are grown in large, airy, well lighted and ventilated greenhouses, and that it is against the law of nature to consign them from such quarters to a dark, hot, stifling

room. Of course the same amount of light cannot be obtained in a room as they enjoyed in the greenhouse. It is this difficulty therefore that we must try to overcome as far as we can. Plants therefore should be arranged in a room so that they may enjoy the light and air as far as circumstances will allow. Some plants can stand for a considerable length of time in a darkened corner of a room, with little or no harm



TABLE VASE FOR OUT FLOWERS.

being done them, such as as *Dracenas*, *Palms*, *Agaves*, *Aloes*, *Ivy*, and the *Ficus elastica*, or india-rubber plant; they all have hard leathery leaves and are able to stand the dry arid air of a room with impunity, but all soft wooded quick growing plants, such as *Fuchsias*, *Geraniums*, or *Pelargoniums*, *Cinerarias*, &c., suffer severely if kept from the light. You should therefore have them always as near the light as possible, and

change them every other week for fresh ones from the conservatory, if you can, and turn them round every day, so that all sides may have the benefit of light equally. Never by any means allow them to get dry. The air in a room is always dry and arid, causing the moisture in the ball of the plant to dry up very quickly. If it ever happens that you allow the ball of a plant to get so dry that the soil shrinks from the pot all round, the best way to moisten the soil thoroughly again is to stand the pot nearly up to the rim in a vessel of water for half an hour or so.

Often I have seen poor ill-treated plants returning to the Greenhouse they had left so fresh and beautiful, looking as limp and dried up as if the hot breath of a furnace had swept over them, and as begrimed with dust as if they had travelled a dusty road for a long summer's day. Plants neglected thus have their beauty spoiled for a whole season, when a little more care and attention bestowed on them would have returned them little the worse for their change of quarters.

Plants in rooms are usually placed in flats or pans for the superfluous water to collect in. This water should never be allowed to remain, as it tends to sour the ball of the plant by too much moisture and exclusion of air from the roots.

When arranging plants in ornamental flower stands, a good bold specimen plant should be chosen for the centre, and the smaller ones grouped tastefully around it with a free unrestricted natural grace, and all stiff formal arrangements should be avoided. This can best

be done by a judicious mixture of graceful Ferns. No other kind of plants break stiff outlines and bring out graceful effects so well as they. When trailing plants are used they are better allowed to grow in their natural way than trained over globe or fan-shaped trellises. When trained in this fashion, on trellises, they have a stiff unnatural appearance, far from pleasing to the eye of taste.

Small single specimens of fine foliage plants are excellent for brackets on the wall, such as *Crotons*, *Begonias*, *Dracenas*, *Caladiums*, *Ficus*, and many others; also Ferns, Mosses, and flowering plants. The common *Ivy* is the best of all trailing plants for the decoration of rooms and passages by means of brackets. A continuous wreath can be carried along a wall in this way; or it may be draped around the window recess, or formed into screens for the drawing-room by being planted in ornamental boxes and trained over a wire trellis.

On the floor in the window recess, and in the empty fire-places, during Summer, tasteful Ferneries can be got up. In a fire-place especially, a natural screen of Ferns, Palms, and such like is far before any other contrivance we see used for the same purpose; and if a small lead pipe be laid on from the water supply, a pretty little fountain can be had to play among the plants.

In the arranging of cut flowers in vases or trumpet glasses, you should always avoid using too many flowers, this is where a great many err; they crowd in flower after flower indiscriminately, and the result is a

confused clumsy mass. Crowding of flowers should always be carefully avoided, and the outline or contour kept as near as possible to what they are when growing. A vase of cut flowers can hardly be arranged too light and elegant. A few Fern fronds, small branches of Asparagus, leaves of variegated grasses, and sprays of Selaginellas, and slender creeping plants, should be placed first in your vase; then a few bold flowers of clear decided colours added. By using only one or two blooms of each kind a great variety can be obtained. The great object in all cut flower arrangements should be to avoid heavy confused masses of flower and foliage. It requires a great deal of study and practice before you can be proficient in this. Ladies with their nimble fingers and quick fancies are always the best hands at floral decorations in the dwelling. It is a department in which they are always at home. This is as it should be. For shallow vases and table glasses wet sand is the best thing you can use for keeping the flowers fresh; wet moss is also very good when the arrangement is only for a short time. Water should be as seldom used in flower vases as possible, it is always so apt to spill. Of course, in glass vases, trumpet and finger glasses it must be used, for sand would have a bad appearance seen through the glass, but in shallow vases, or where you can hide the glass with Fern fronds or sprays, sand should be used, saturated with water.

Flowers are always more natural looking dressed with their own foliage. The *Lily of the Valley* for instance never looks so nice as when dressed with its

own bright green leaves ; and when Roses are used, the aid of their foliage is almost indispensable ; the only other greenery I care for seeing in connection with Roses are ferns, and sometimes a few sprays of wild grasses.

If the cut flower arrangement is intended for gaslight, yellow is best kept out altogether. The colours that tell best by gaslight are green, white, light blue, bluish pink, scarlet and crimson of every shade. With



a good arrangement of those telling colours, backed with fern fronds and Rose tree leaves, and draped with sprays of *Linaria*, small leaved *Ivy*, *Selaginella Hortensis*, *Periwinkles*, or any other slender trailing plant, and a few *grasses* added for lightness, a very handsome vase of flowers can be made up for the drawing-room or dining-room.

Vases arranged with fruits and flowers form the usual decorations of dinner-tables in conjunction with

pot plants of *Palms*, *Cycads*, *Dracenas*, *Ferns*, *Caladimius*, *Crotons*, and other fine foliage plants. Table decorations should always be light, airy, and graceful. If the specimen plants used are large and the cut flower arrangement heavy the whole thing is a nuisance rather than an ornament, obstructing the view and interfering with the freedom of movement. When decorating the table then, use neat handy specimen plants, placing the largest in the centre, and have your vases and trumpet glasses light and elegantly got up.

Roses are the great favourites for all purposes where cut flowers are employed, and during the Summer there is no stint of that lovely queen of flowers. In the Autumn, Winter, and Spring the principal flowers used are *Orchids*, *Azaleas*, *Camelias*, *Spring flowering bulbs*, *Lily of the Valley*, *Cinerarias*, *Pelargoniums*, and all the usual forced flowers of the season.

The commoner flowers of the year make as good arrangements as the rare and high priced Orchids and hot house flowers. Nothing can excel the effect of the *Rose* or the *Iris*. *Dahlias*, *Gladioli*, *Geraniums*, *Fuchsias*, *Stocks*, *Asters*, and in fact all the common summer bedding plants are excellent to cut from. Some of the hardy herbaceous border flowers are really gems; for instance the *Aster alpinus alba*, is just as good a white flower as we need wish for; while the *Carnations*, *Picotees*, and *Pinks* are the favourites of all cut flower decorators, *Penstemons*, *Antirrhinums*, *Sweet Williams*, and *Floxes* are also good cutting flowers. And for Winter table decoration what could be better than the richly coloured variegated *Scotch*

*Kales*; their beautiful crisped and curled leaves are the most desirable and handy bits of foliage we can come at during the Winter months. Even the country lanes and hedge rows, nearly all the year, abound with excellent materials for decorative purposes, requiring only the hand of taste to arrange them properly. And very interesting and pretty indeed is a vase tastefully filled with the wild natural products of the woods and fields, and country lanes.



ORNAMENTAL BASKET OF FLOWERS AND FERNS.

## CHAPTER XXII.

## MONTHLY CALENDAR OF OPERATIONS.

## JANUARY.

**D**URING this month the days will begin to lengthen out again and by-and-bye plants will begin to grow freely. The window plants in bloom for this month are the *Cinerarias*, *Cyclamen*, *Chinese Primroses*, *Snowdrops*, early *Crocuses*, and *Hyacinths*, *Christmas Rose*, &c. *Chrysanthemums* will still be in good flower. Plenty of water must be given them. The Pompon class are the most suitable for windows. Ferns and Mosses in Wardian cases do not require so much water and moisture, while not in active growth. Plants such as *Agaves*, *Aloes*, *Cacti*, *Echevarias*, *Sempervivums*, *Sedums*, and all succulent plants should be kept dry and allowed as much sun as possible. Sponge the leaves of plants to keep them free from dust and remove all decaying parts at once. Withhold water from plants except only when they really need it, and be careful to protect them from frost. Place your plants on the floor when the weather is frosty, and cover them with newspapers. During severe weather all your plants should be removed to a room where constant fire heat is kept

up. Boxes and pots of Bulbs will all be growing nicely now and should be removed to the light, and supplied with water. Balcony plants in very severe weather should be under cover.

#### FEBRUARY.

The plants in flower are the same as last month, with the addition of *Violets*, early *Pansies*, *Arabis*, *Cytisus*, *Coronilla*, early *Primroses*, *Hepaticas*, and early *Tulips* and *Narcissus*; and with the exception of *Chrysanthemums*, which will now be out of flower. Cut them down and set the pots aside till you get cuttings from them. Prepare boxes and pots for *Mignonette* and all annuals required for indoors. Window and balcony boxes and pots of spring bulbs will now be coming into flower, and should be placed in position for flowering. Hanging baskets should now be filled with their summer occupants if intended for indoors. All plants will now be starting into active growth, and old *Fuchsias*, *Geraniums*, and cuttings of all kinds in pots kept over winter, should now be repotted. Protect all from frost and supply with water, which should always be tepid to prevent chilling of roots. Everything should be put in order for the coming season.

#### MARCH.

Hardy spring flowers of all sorts are now to be had in plenty, and this is the time for getting a supply for your window and balcony boxes. Among others there are the

*Primroses, Polyanthuses, Wallflowers, Stocks, Pansies, Violas, Daisies, Hepaticas, Forget-me-nots, Arabis, Aubretia, Auriculus, Sedums, Ranunculuses, Anemones, &c.* Balconies and windows will now be very gay with spring bulbs and other plants. This is the time for rearranging and planting Fern cases. Where old plants are getting too large they should be divided or taken out, and new ones planted. All the Mosses require replanting and thinning out; and the case should be put in good working order for the season. Potting should now be finished, and if not done already, baskets should be filled with their summer flowers. Look to watering and the keeping of all plants in order and cleanliness. Put in cuttings of *Chrysanthemums* for autumn flowering.

#### APRIL.

During this month a general rearranging of balconies should take place. All hardy shrubs and trees in tubs and pots that have been standing through the winter should be removed and plunged in an open border shaded from the sun, till the return of autumn. Their places will be occupied for some time longer with *Kalmias, Rhododendrons, Mahonias, Thorns, Ribes, Double flowering Cherries*, and other spring flowering shrubs and trees. All the hardy spring flowers, such as *Wallflowers, Stocks, Pansies, &c.*, with all the spring flowering bulbs will now be getting very gay. All creeping plants, such as *Ivy, Virginian creeper, Clematis, Roses, &c.*, should now be planted at bottoms

of walls or in boxes on the balcony for draping railings and covering walls.

#### MAY.

In this month bedding plants of all sorts are cheap and plentiful, and all boxes for balconies and windows should now be filled and placed in their positions for the season. Seeds of annual climbers, such as *Nasturtiums*, *Tropeolums*, *Ipomæas*, *Scarlet Runners*, &c., sown last month will be coming through the soil. Wire or twine should be arranged for them to cling to wherever you wish them to run. Hanging baskets for balconies should now be arranged, and rockeries for balconies and areas constructed and planted. Roses of all kinds will now be coming into bloom and should be placed where they are to flower. Great care must now be taken to keep all plants well watered, trained, and kept clean and in good order. Watering should now be done if possible after sundown. Plants enjoy the benefit of the watering before the sun is up again.

#### JUNE.

This is the month of Roses, and flowers of all sorts are now plentiful and cheap, and the full summer display can now be made up. Annuals of all sorts will now be very gay; *Rhododendrons* will be in their full beauty; and bedding plants will be coming into full flower. Boxes, pots, and fern cases should now be well supplied with water and encouraged to make a good start in growth. All old spring bulbs should

be run out into an open border to ripen; afterwards they may be shaken out, and put away in a cool, damp place till autumn. All spring flowering shrubs should be plunged into the border for the summer season. Staking and training annuals, young *Chrysanthemums*, and all growing plants should be done as required, small green painted stakes being used for the staking. Cuttings of good sorts of *Fuchsias*, *Geraniums*, &c., may be taken, and inserted in pots to strike. Smoking with tobacco paper and syringing should be done to destroy greenfly and other insect pests as soon as they appear.

#### JULY.

All seasonable flowers will now be in great beauty, and windows and balconies will be very gay. All creepers will require attention to train them where wanted, to hang in graceful wreaths from balcony and window. All superfluous growths, however, should be cut off, and all dead flowers, leaves, and decaying parts removed. All plants done flowering should be placed aside and others put in their place. Window plants should be allowed plenty of air and light to prevent them getting weak and drawn. Put in cuttings of all bedding and pot-plants you wish to propagate, and sow seeds of tree Mignonette for winter flowering. Destroy all insect pests by fumigating and syringing; and wash the foliage of the plants occasionally to remove dust. See that no plant suffers for want of water, and water always now after sundown.

## AUGUST.

All the directions for last month stand good for this. The general display will now be at its height, and all climbers and hanging baskets will be well furnished with flowers and foliage. Nothing looks so well in window and balcony boxes as the Ivy-leaved Geraniums, now in full beauty. Fern cases will be in good condition now, requiring careful attention in regard to moisture and shade. If window plants and boxes are getting crowded remove a plant or two to give room. Clear away all out-blown Annuals, and fill up the spaces left with any plant you have handy. *Stocks* and *Asters* will be lovely now. Water carefully, not in driblets, but enough to soak the ball at once. Plants in pots on the balcony are better plunged in boxes with sand or moss to keep the hot sun's rays from scorching the roots.

## SEPTEMBER.

Autumn is now beginning to put in an appearance, but flowers are still plentiful. *Stocks*, *Asters*, and African and French *Marigolds* are now in their full beauty; and the Annual creepers are lovely. The *Virginian creeper* is now beginning to assume its Autumn tints of brown and crimson. Look well to the staking and watering of *Chrysanthemums*; give them liquid manure occasionally, and keep their branches well tied up to the stakes. The watering and training of other plants must be carefully attended to. Indoor winter hanging baskets should be made up this month, so that they may be well established for this

purpose before winter sets in; use *Ivy*, *Ferns*, *Selaginella*, *Echevarias*, *Saxifragas*, *Sedums*, and any nice little green or variegated shrub. You should be ordering your Spring bulbs this month. Choose heavy, firm, clean looking bulbs, and remember that single Hyacinths are better bloomers than double ones. It is not necessary to purchase new or high-priced ones to make a good display. Old varieties are cheap and bloom as well, and sometimes better than the new ones.

#### OCTOBER.

Balcony and window gardens will now be getting dull. Frost is now sure to come, and plants outside you wish preserved should be brought inside, and a general clearing up made. Hardy shrubs may be brought from their summer quarters to furnish the balcony and area. *Chrysanthemums* are the mainstay of the season; a good selection of them looks magnificent on a balcony; they come into bloom this month and last for some time after Christmas. A splendid decorative plant for balconies is the variegated *Scotch Kale*. A quantity of them should be grown where practicable, during the summer, for winter use. To have them dwarf they should be cut over in August and the tops rooted like cuttings in an open border. They form very nice dwarf plants for filling boxes at the present time, and can be arranged according to colour, when they look splendid. All tints of colour from blackish purple to nearly French white are to be found amongst them. This is the best month for planting spring

bulbs in pots and boxes. The proper soil consists of equal parts of turfy loam, leaf mould, dry cow dung rubbed down and silver sand. Hyacinths should have the crown of the bulb above the surface ; all other bulbs should be set from an inch to two inches below the surface. After they are planted give them a good watering and stand them in any dark place out of the way, or cover them up with sand or ashes outside, till they spring a little. Great care must be taken that mice do not get at them. They make dreadful havoc among Crocuses and Tulips when they get the chance. A few large Hyacinths can be selected and put in glasses or vases with water. Hanging baskets should also have a few Crocuses and Snowdrops put in them, Winter Mignonette will now be coming into flower. Windows may be kept full outside with *Ivy*, and small *Shrubs*, or *Conifers*, *Golden Thyme*, or any other hardy plant suitable for the purpose.

#### NOVEMBER.

The dull cold days of Winter are now setting in. Every precaution must be taken to protect tender plants from frost. Give them as much sunlight as you can, and reduce the supply of water. Keep plants clean by washing with tepid water and never water them with water less than at 65 or 70 degrees of heat. Roots of different hardy plants may be lifted from the border and potted for forcing, such as *Dielytra spectabilis*, *Lily of the valley*, *Primroses*, *Forget-me-nots*, *Hepaticas*, &c. Early *Cinerarias*, *Primulas*, and

*Cyclamen* will now be in flower, and will be very welcome in the window, now that other flowering plants are past blooming.

DECEMBER.

This is a very barren month for flowers. The *Chrysanthemums*, however, will now be making a splendid show, as they are in full beauty this month. The *Primulas*, *Cinerarias*, *Cyclamen*, and early *Crocuses* and *Snowdrops* will help to lighten up the gloom. Be very sparing of water this month ; give just enough to keep the plants alive, as they are all more or less at rest. Keep *Agaves*, *Aloes*, *Cacti*, and all succulent plants quite dry and exposed to the sun. Be careful to remove all decaying parts of plants and dead leaves, and gather all your plants into a room where a constant fire is kept up, and there is no danger of frost hurting them. Fern cases do not require much moisture. On very cold nights a thick cloth should be wrapped around them, and every precaution taken to keep them from frost.



RUSTIC JARDINET FOR CROCUSES.

## CHAPTER XXIII.

## CONCLUDING REMARKS ON WINDOW GARDENING.

**B**EFORE bidding adieu to you, my dear readers, let us take a review of the whole question of window gardening. We have travelled on together from page to page and chapter to chapter till the subject has become as familiar to our ears as an old song, the ever recurring refrain of which has been "Take care of our window plants." And I am sure the pleasure in the subject we have discussed must have been mutual, I in giving advice, you in profiting by it. For we all have a love for the floral beauties of nature that decorate the pathway of our life.

It is no false or costly pleasure I have been advocating. It is a simple heart-felt, every-day enjoyment, in which the very poorest may share. Those of my readers who are confined in towns, will understand this better than those who live in the country. In the town a blade of grass even creates a sweet enjoyment, and the little modest Daisy or Buttercup is quite enough to send a town's wearied heart into raptures, while a blooming Geranium or Fuchsia is like an oasis in the desert—a pleasant resting place for the wearied mind. In the country a thousand charming objects

attract our attention. We have the universal privilege of Nature—the right to enjoy all the beautiful works of God—the right to share in all the many free gifts He has provided for His creatures, the free air of Heaven, the songs of the singing birds, the verdure of the woods and fields, and the beauty of the countless hosts of wild flowers that decorate the earth. To one who has enjoyed those pleasant sights and sounds of country life, and remembers them amid the dust and smoke of the city, a few flowering plants and ferns must be a real benefit, and delightful remembrances of bygone days, conjuring up happy dreams of the leafy woods, the hedge-rowed lanes and the breezy open fields of the country.

It only requires you to understand a few plain rules to enable you to be a successful window gardener, and those rules may be summed up in a few words. Give your plants sufficient pot room and drainage, and proper kinds of soil; give them sufficient water; keep them clean and tidy, and well trained and staked; give them plenty of light and air, and protection from cold draughts. All this we have discussed in the preceding chapters; but I would again impress upon you the good rule never to let your plants suffer for want of water, or to suffer from giving them too much. Nothing brings on disease and ultimate death so quickly as neglecting them in those two particulars. Allowing them to get often dry, throws them into a faded, stunted state of growth; then Greenfly and other vermin soon follow. Giving too much water tends to sodden and sour the soil; then root action ceases, they cannot

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extract the food necessary for the plant's existence, and generally they rot away altogether from excess of moisture, and the plant gradually collapses. Good and proper drainage in the bottom of the pots will prevent this to a great extent. You will soon learn to know when a plant wants water by the appearance of the surface of the ball, or by ringing the pot as I described in a former chapter. You must also keep your plants clean and tidy by removing all decaying parts; keeping the pots from getting green or dirty; and by washing your plants periodically, leaf by leaf, to remove all dust that may settle upon them. You know a plant breathes the fresh air by its leaves, which are in reality its lungs; you will easily understand by that the absolute necessity of giving them plenty of air during good weather, provided there is no draught, and keeping the leaves clear of dust, not to intercept their air-breathing action. This you can only do by washing them, using a bit of sponge or flannel and tepid water. It is an operation you require to do gently, never rubbing the leaf, but drawing the sponge gently towards the point of the leaf. In washing the delicate fronds of Ferns great care must be taken, as they are easily broken or torn. You must also take care never to let your plants get straggly or one sided. Stake them properly, and turn them round often towards the light, so that one side may not grow away from the other. All plants tend to grow towards the sun or light.

Some plants require moisture and shade more than others. This rule applies more to ferns than flowering

plants. The proper window for ferns and mosses would be one the sun does not shine upon. In such a window, with water now and then overhead, they would grow and thrive nicely. To have them exposed to the sun throws them into an unhealthy, lingering state, and then they are far from being satisfactory.

I am sure nothing could be so pleasant, as to see the plants you have taken under your care, thriving and healthy. Any little trouble you have had with them you will feel is paid back with good interest. An hour or two spent in tending your plants is never lost, and will cause no sad reflections in the mind, such as there might be, if the same time had been spent idling about. The love of flowers ennobles and purifies the heart and fills the soul with thoughts and ideas of the beautiful, that might never have been called forth, if the lovely flowers had not been present. There are very few who do not love to linger over a pretty flower, admiring its glorious tints and exquisite proportions. What would the world be without the charm of their existence? We should miss the richest charms and graces of Nature, and the world would be indeed dull with no modest Daisy or queenly Rose to deck the path of life. The thinking mind recognises in them the hand of the OMNIPOTENT CREATOR. It is HE alone who could call forth such lovely delicate creations as the Lily or the Rose. And nothing evinces the almighty power of HIS HAND so well as the floral beauties of Nature in all their varied forms and gorgeous hues.

## ALPHABETICAL LIST OF PLANTS

## SUITABLE FOR

WINDOW AND BALCONY GARDENS AND THE  
DECORATION OF ROOMS.

*Abronia umbellata*.—A charming trailing plant, with rose coloured verberna-like flowers. Half-hardy annual, flowering from July, till October. CALIFORNIA.

*Abutilon Thomsonii*, *A. venosum striatum*, *A. Boule de Neige*, and *A. floribundum*.—Plants with extremely beautiful bell-shaped flowers, richly striped and veined, yellow and reddish rose. Good window plants and succeed well on balconies during summer. *A. venosum striatum* has pretty variegated foliage, and *Boule de Neige* has lovely white flowers. They grow well from seed or cuttings, raised in heat; and require close pruning every year. Half-hardy greenhouse plant. BRAZIL.

*Acacia armata*, *A. grandis*, *A. lophantha*.—Very handsome greenhouse shrubs, good for window and balcony decoration during summer, but requiring indoor protection during winter, good pot plants. Propagate by cuttings. Flowers yellow. AUSTRALIA.

*Acanthus mollis*.—A stately herbaceous hardy plant; good for pot culture, either indoor or on the balcony.

It has large glossy leathery textured foliage, beautifully serrated and lobed. Flowers pink and white. SOUTH OF EUROPE.

*Achimenes*.—Lovely tuberous rooted stove and greenhouse plants, suitable for miniature greenhouse or plant case. Propagated from tubers every season. Of easy culture. Flowers various. SOUTH AMERICA.

*Acroclinium roseum*, *A. roseum album*.—The Everlastings; very pretty window plants. Half-hardy annuals, raised from seed. *A. roseum* has rose coloured flowers; *A. album* has white. Good for cutting for winter bouquets, vases and such like. AUSTRALIA.

*Ageratum mexicanum*.—A well known bedding plant, very suitable for pots or boxes, on balconies. Flowers light blue. MEXICO.

*Agapanthus umbellatus*.—The Blue African Lily, or love flower, a bulbous-rooted plant, with handsome strap-shaped foliage. Flowers bright blue, borne in clusters on stems of from two to three feet high. Good for pot culture on balconies. Requires protection in winter. SOUTH AFRICA.

*Agaves*.—Succulent plants, admirably suited for balconies, halls, vestibules and rooms. Of easy cultivation, requiring little water, and protection from frost. AMERICA.

*Agathea caelestis*.—An old fashioned plant of remarkably easy cultivation. Neat little decorative plant for rooms and windows. Flowers daisy like, and clear blue. Easily propagated from cuttings. SOUTH AFRICA.

*Amaranthus*.—Extremely beautiful foliage plant for

room and table decoration ; also for windows and balconies. Flowering in feather, like pannicles. Raised from seed in gentle heat. Half-hardy annuals. EAST INDIA and JAPAN.

*Aloes*.—Succulent plants ; very suitable for window and balcony decoration, requiring very little water. There are numerous varieties. AFRICA.

*Aloysia citriodora*.—The well known "*Sweet scented Verbena* or *Lemon plant*. A general favourite with window gardeners for its highly fragrant foliage. Requires close pruning every year. Propagate by cuttings. CHILI.

*Ampelopsis hederacea*.—The Virginian creeper, well known as the next best to the Ivy as a town creeper for walls and balconies, draping windows and railings with elegant wreaths of bright green foliage during summer and changing to rich brown and crimson in autumn. Of vigorous rapid growth, easily cultivated, and multiplied by cuttings or layers, adapting itself to any situation. NORTH AMERICA.

*Arabis alpina*.—A dwarf hardy spring flowering plant of tufted growth, good for rock-work and balcony boxes for spring decoration. Flowers white. The variegated forms are very pretty. SWITZERLAND.

*Aristolochia siphon*.—The *Dutchman's pipe*, is an excellent climbing plant for covering walls, and trellis-work, in conjunction with Ivy and other climbing plants. It has large heart-shaped bright green leaves. Its flowers, which are dark purple, are bent like a siphon, hence the name of "*Dutchman's pipe*." It is a very effective balcony plant. NORTH AMERICA.

*Aster alpinus alba*.—A hardy herbaceous border plant, which, with its other varieties are known as "*Michaelmas Daisies*." It is an excellent white flower for pot culture in windows. Splendid to cut from for decoration. CAPE OF GOOD HOPE.

*Aucuba Japonica*.—A well known hardy variegated shrub, among the best for balconies during winter. There are male and female varieties. The female plant bears red berries. JAPAN.

*Azealea indica*.—A well known and favourite class of winter and spring flowering plants with beautiful variously coloured flowers produced in great profusion. Magnificent plants for room, hall, and corridor decoration. INDIA.

*Bambusa Fortunei variegata*.—A beautiful little variegated Bamboo for window and plant case culture, growing about a foot high. Leaves richly striped with creamy white. Propagate by division. CHINA.

*Begonia*.—A magnificent class of flowering and fine foliage plants, suitable for greenhouse, plant case, or window, and capital table-plants. SOUTH AMERICA.

*Bellis perennis*.—The well known hardy double Daisy, suitable for boxes in windows and on balconies in spring. Propagate by division. GARDEN HYBRID.

*Calceolaria hybrida*.—The well known greenhouse *Slipperworts*. Large flowering lovely window plants, requiring plenty of water and to be kept free of Green-fly. The common bedding Calceolarias are among the most effective of plants for window and balcony boxes. Propagate by seeds and cuttings. SOUTH AMERICA.

*Cala æthiopica*, or "*Lily of the Nile*."—A grand plant for window culture, with large bright green leaves and handsome trumpet shaped flowers. It is a splendid table plant, and the flowers are very useful for decorative purposes. Propagate by offshoots and division. CAPE OF GOOD HOPE.

*Calystegia Dahurica*.—An elegant climbing plant, excellent for training in any place where fresh foliage and flowers are required. Flowers rosy purple: Propagate by division. *C. sepium*, is the common white flowering species of the hedge rows, quick growing and invaluable for all kinds of trellis-work.

*Candytuft*.—Well known hardy annual, suitable for boxes. Flowers purple and white. Sow in Spring. SOUTH EUROPE.

There are numerous other annuals suitable for balconies and windows. The best are the *Clarkias*, *Nectarinias*, *Næmophilas*, *Larkspurs*, *Virginian stocks*, *Godetias*, *Jacobeas*, *Anagalis*, or *pimpernels*, &c., &c. Sow in boxes in spring, and turn out, leaving a few plants to flower.

*Cerastium Bielbersteinii* and *C. tomentosum*.—The well known silvery leaved "*Snow in summer*;" good for edging boxes. Propagate by division in spring. CAUCASUS.

*Chamædora elegans*.—A slender growing elegant little Palm, much used in Northern Germany for room decoration. MEXICO.

*Chamærops humilis* and *C. Fortunei*.—Effective little Fan-Palms for the decoration of apartments during

winter. Stand them out on the balcony during summer and give them plenty of water, *C. humilis* is the only European Palm naturalised in SPAIN and ITALY.

*Chrysanthemum*.—Well known autumn flowering plant, requiring to be potted in rich soil, and abundantly watered, often with liquid manure. Splendid decorative plant for towns. Propagate from cuttings in spring. CHINA and JAPAN.

*Cineraria cruenta*.—The well known spring flowering pot plant. Excellent for decorative purposes, having magnificent heads of flower. Propagate from seed and cuttings during summer. CAUCASUS.

*Cissus antarctica*.—The Kangaroo Vine, good, fresh green free growing climber for windows and balconies during summer. One of the very best for trellis-work. Propagate by cuttings and layers. AUSTRALIA.

*Clematis Jackmanii*, *C. lanuginosa* *C. John Gould Veitch*, *C. Fortunei*.—And other varieties are among the very best flowering plants for all sorts of trellis-work, draping windows and balconies, with pretty green foliage and abundance of large beautiful flowers during summer. They require cutting close down every year after flowering. Propagate by cuttings, root grafting, and division. EUROPE and JAPAN.

*Cobæa scandens*.—A rapid growing, splendid window climber, blooming freely during summer. Large purple, bell-shaped flowers. Propagate by cuttings and layers. MEXICO.

*Coleus Verschaffeltii*.—And many other varieties are beautiful decorative plants in pots for rooms, dinner-tables, or window and balcony. Richly coloured

foliage. Propagate by seeds and cuttings. EAST INDIA.

*Convollaria majalis*.—The well known "*Lily of the Valley*." Pot plant to force. Propagate by division. GREAT BRITAIN.

*Convolvulus mauritanicus*.—An extremely graceful drooping blue flowering plant, excellent for hanging baskets, brackets, &c., and of easy cultivation. Propagate by seeds or cuttings. MAURITIUS.

The *Convolvulus major*, and several of the *Ipomæas* are capital balcony and window climbers.

*Coronilla glauca*.—Splendid winter and spring flowering plant for windows, bearing a profusion of rich yellow flowers. Requires regular attention with water. Propagate by cuttings in close case during Spring. EUROPE.

*Cotoneaster microphylla*.—An excellent hardy climbing shrubby plant, good for covering bare walls bearing a profusion of reddish berries in the autumn and winter months. Propagate by cuttings and layers. NEPAUL.

*Cytisus racemosus*.—A free flowering greenhouse shrub, excellent for decoration in spring, bearing a profusion of yellow pea-shaped spikes of flower. A companion for the *Coronilla*. Propagated by cuttings. CANARIES.

*Cuphea platycentra*.—A free flowering old fashioned window plant, much like a miniature Fuchsia in appearance. Propagate by cuttings. MEXICO.

*Cyclamen Persicum*.—Very lovely tuberous rooted, spring flowering plant. It requires plenty of water,

and is a splendid greenhouse and window pot plant of easy culture. Raise from seed. CYPRUS.

*Dielytra spectabilis*.—A well known hardy herbaceous plant, forming nice bushy, free flowering plants for windows under pot culture, flowering in slender nodding spikes of pink heart-shaped blooms. Imported from Belgium in autumn for forcing. EUROPE.

*Dracæna*.—In many varieties. They are fine foliaged graceful habited plants, some of them nearly hardy, such as *D. Australis*, *D. cannæfolia*, *D. congesta*, *D. rubra*, and *D. terminalis*; *congesta* and *rubra* are used by thousands by the London florists for room and table decoration. They require good bottom heat for propagation. AUSTRALIA.

*Echevaria agavoides*.—The "*Agave, like Echevaria*," a very good window plant resembling a small agave in habit. *E. fulgens* is a free flowering beautiful window plant. *E. secunda* and its varieties are well known for their usefulness as summer bedding plants. They are excellent for window and balcony boxes or rockeries. Propagate by offshoots. SOUTH AMERICA.

*Erythrina crista galli*, and varieties, generally known as the *Coral Trees*.—Superb shrubs having magnificent bunches of crimson scarlet blossoms. Splendid decorative plants for rooms. Propagate by seeds and cuttings. BRAZIL.

*Eucalyptus globulus*. The "*Blue Gum Tree*" of "Australia."—This is a noble plant for balcony decoration during summer. Foliage of a glaucous or pale blue tint. May be seen planted out in most of the London parks during summer. Propagate by seed and cuttings.

*Eugenia ugni*.—An evergreen shrub resembling the Myrtle in general habit. It bears a profusion of lovely waxy white flowers during spring, followed by reddish berries of a rich aromatic flower, and edible. A good window plant. Propagate by cuttings. PATAGONIA.

*Ficus elastica*.—The *India rubber Plant*. A most distinct and effective plant for room decoration. It has great leathery glossy green leaves of a noble handsome appearance. Propagate from cuttings in a close case during spring. S. AMERICA.

*Fragaria indica*, or *Indian Strawberry*. An elegant trailing plant, excellent for hanging baskets and brackets, bearing greenish white flowers and crimson fruit. N. INDIA.

The common wild Strawberry, *F. vesca*, is also an excellent basket plant, as is also the *Fragaria Alpinas*, rivalling in beauty the well known *Aaron's beard*. Propagate by runners during summer.

*Fuchsia*.—The well known beautiful favourite window plant. The greenhouse varieties are legion. For list of best named varieties refer to the chapter on greenhouse plants. Of easy culture. Raise from seed and cuttings. S. AMERICA.

*Funkia Japonica*.—A tuberous rooted hardy plant, known as the *Japan day Lily*. Some varieties of Funkia are beautifully variegated. They are all pretty decorative plants for windows and balconies, flowering in spikes of bell-shaped flowers, blue and white. Propagate by division. JAPAN.

*Geranium* or *Pelargonium*.—The acknowledged

leader of window plants, and the most gorgeous of all decorative plants for window and balcony. For named varieties see list in former chapter. Of easy culture. Propagate by cuttings during summer.

*Gesneria*.—Superb tuberous rooted stove plants. Beautiful for Plant case and grand table decorative plants. *G. Exoniensis* is hardy enough for inside window culture. Flowers of rich orange. Foliage velvety and richly coloured. Propagate by tubers in close case. SOUTH AMERICA.

*Gloxinia*.—Beautiful hardy stove plants, with superb bell-shaped flowers of various tints, some drooping, some erect. Foliage velvety and handsome. Tuberous rooted. Splendid for Plant cases in rooms. Propagate by leaves in good bottom heat, or by tubers cut into two or four pieces in a close case.

*Hedera helix*.—The common *English Ivy*. This together with Irish Ivy, *H. Hibernica* and *H. Canariensis*, and the many variegated and green sports and varieties of each, form the most valuable class of plants in use for general decorative purposes, adapting themselves to any situation. It is of extremely easy culture. Propagate by young shoots and layers.

*Heliotropium Peruvianum*.—The well-known garden *Heliotrope* or "*Cherry Pie*."—A good window plant with a strong agreeable perfume. It is a perpetual bloomer, having terminal trusses of pale blue or purplish flowers. Propagate by cuttings during summer. PERU.

*Hotteia (Spiræa) Japonica*, or *Japanese Meadow sweet*. A favourite spring blooming plant, for decora-

tion; of dwarf bushy habit. Foliage bright green. Flowers in feathery white spikes; capital for cut flowers. Quite hardy. Propagate by division, or purchase imported roots. JAPAN.

*Humulus lupulus*.—The *Hop plant*.—An excellent climber for covering walls, trellis work, pillars and verandas. It resembles the Grape Vine in growth, and is of a quick growing graceful habit. Dies down to the root annually. Propagate by division. GREAT BRITAIN.

*Hydrangea Hortensis*.—This is a noble and very showy plant for balcony or window, producing immense trusses of rosy coloured flowers that last for months—all through the summer season. Quite hardy in the south of England. Propagate by cuttings. CHINA.

*Ipomœa*, or *Convolvulus*.—A class of plants containing some of the most beautiful annual climbers in cultivation, pre-eminent for their beauty and usefulness as decorative climbers for windows and balconies. Raise from seed in gentle heat, and transplant. INDIA and AMERICA.

*Iresine herbstii*, *I. Lindenii*, *I. acuminata*.—Half hardy plants with richly variegated stems and foliage; suitable for hanging baskets, windows and balconies. Propagate by cuttings in gentle heat in Spring. BRAZIL.

*Jasminum officinale*.—A beautiful hardy climbing plant for covering walls. Requires close pruning every year. Flowers sweetly scented and of a pure white. *J. nudiflorum* is a pretty yellow flowered climber in

bloom during winter. Propagate by cuttings or layers.  
EAST INDIES.

*Lilium auratum*.—The acknowledged *Queen of Lilies*, with magnificent gold banded and reddish spotted white flowers. Splendid window or balcony plant. The next best are *L. lancefolium rubrum*, *L. lancefolium roseum*, *L. chalcedonicum*, *L. candidum*, and *L. tigrinum*. Pot the bulbs in spring, and plunge them in the open border till they show signs of flowering; then place them in position. JAPAN.

*Linaria cymbalaria*.—The Ivy-leaved Toad-flax. A very pretty little creeping plant of slender growth with small round ivy-like leaves and neat little pink snap-dragon-like flowers. First rate for hanging baskets, brackets, or rockwork, *L. cymbalaria aurea variegata* is a golden variegated sport from the above and an exceedingly pretty basket plant. Raise from seed or secure young plants where they grow wild. GREAT BRITAIN.

*Loasa tricolor*.—Beautiful climbing greenhouse plant suitable for training round a window or light trellis-work. Flowers of a light orange. Raise from seed SOUTH AMERICA.

*Lobelia speciosa*.—A well known summer bedding plant, of a neat compact growth, with small showy blue flowers. The best of all plants for the edges of window or balcony boxes. Makes a grand display. Pretty for baskets or brackets. There are numerous varieties. Raise from seeds. Cuttings strike freely in gentle heat. CAPE OF GOOD HOPE.

*Lonicera sempervirens*, *L. Japonica*, *L. pubescens*.—The

*Honeysuckle.* Good climbing plants for covering walls and trellises. *L. Periclymenum* is the common *sweet-scented honeysuckle* or *Woodbine*. *L. Aurea reticulata* has prettily golden spotted leaves. Dwarf and hardy. Good for pot or balcony culture. Propagate by cuttings or division.

*Lophospermum scandens.*—A handsome greenhouse climber, suitable for training round windows during summer. Raise from seed in heat during Spring. MEXICO.

*Lysimachia nummularia.*—The *Creeping Jenny*; often called the *Moneywort*. An excellent plant for baskets, brackets, or boxes, and a great favourite with every one. Flowers yellow, arranged down the stems, which droop festoon-like over pots or baskets. Propagate by division. Hardy. GREAT BRITAIN.

*Lychnis.*—A showy class of hardy Perennials, forming handsome balcony plants when in bloom. Flowers white and scarlet. Propagate by seed and division. RUSSIA and GERMANY.

*Maurandya Barclayance*, *M. B. alba* and *M. B. kermesina.*—Superb half-hardy climbers, suitable for window decoration in conjunction with the *Lophospermum scandens*. Sow seeds in heat in spring, and prick off into pots. Flowers purple, white, and red. MEXICO.

*Mesembryanthemum.*—The *Fig Marigold*. A large class of succulent plants, of dwarf trailing habit of growth, excellent for either pots, baskets, or rockwork, There are many varieties, the best of which are *M. amœnum*, with bright green foliage, and rosy-lilac

flowers ; *M. cordifolium*, a lovely golden yellow-leaved bedding plant and a splendid pot or basket-plant ; *M. crystallinum*, the *Ice plant*, having the appearance of being thickly coated with icy dew-drops ; *M. spectabile*, with glucous leaves and large bright purple flowers ; *M. conspicuum*, with bright rosy flowers ; *M. cordifolium* of trailing habit, with small bright green foliage, and purple flowers, often seen in cottager's windows. There are several other varieties, well worth growing. They are all good decorative plants, and excellent for rockwork. Propagate by pieces pulled or cut off and laid on damp sand in the sun. They soon root. CAPE OF GOOD HOPE.

*Mimosa pudica*.—The *Sensitive plant*. An interesting window plant, with pretty green spine-clad foliage, of a peculiar sensitive nature, drooping directly after being touched, as if endowed with feeling. Well worth growing as a curiosity. Raise from seed in heat and grow in a case till established in pots. BRAZIL.

*Mimulus maculosus*.—The *Spotted Monkey flower*. Lovely ornamental plant for windows and balconies. *M. cardinalis* (scarlet), *M. cupreus* (orange scarlet), and *M. grandiflorus* (mixed), are among the best for decoration. Propagate by cuttings and seeds in spring. N. W. AMERICA.

*Mimulus moschatus*.—The *common Musk plant*. A general favourite with everybody on account of its grateful musky perfume. There are few cottagers who do not grow it. Excellent for edging boxes or baskets, and filling brackets. It has a graceful drooping habit,

its fresh green shoots being studded with little yellow flowers. Of exceedingly easy culture. Propagate by division and seed. COLUMBIA.

*Reseda odorata*, *R. grandiflora*, the well-known *Mignonette* or "*little darling*."—A general favourite for its neat pretty habit and delicious perfume. Hardy annual *R. odorata grandiflora* is the large flowering tree mignonette, so much prized for pot plants for winter blooming. Raise from seed. EGYPT.

*Myrtus communis*, the *Common Myrtle*.—A well-known aromatic greenhouse shrub, nearly hardy. A favourite window plant with many. The *small-leaved Myrtle* is a nice dwarf compact pot plant for windows. They are of easy cultivation. Propagate by cuttings. SOUTH OF EUROPE.

*Myosotis*, the lovely *Forget-me-not*.—Everybody's favourite. A lovely balcony and window plant in spring and early summer. There are several varieties. Flowers blue and white, and all worth growing. Propagate by division and seed. EUROPE.

*Nerium Oleander*.—A fine flowering greenhouse shrub very suitable for balconies. Rose-coloured flowers. It is of easy culture and is readily propagated from cuttings. SOUTH EUROPE and PALESTINE.

*Nolana paradoxa*, *N. violacea*.—Very pretty trailing plants, suitable for window culture. *N. paradoxa* has dark purple flowers; *N. violacea* violet flowers. Raise from seed. CHILI.

*Nicotiana virginica*, the *Tobacco plant*, always an interesting object to smokers who love the "*weed*." It forms a striking ornamental plant on balconies,

grown in pots or tubs. Raise from seed in heat, and harden off. AMERICA.

*Ornithogalum longibracteatum*, the *Star of Bethlehem*, or the cottager's *Window Onion*.—Often seen in cottagers' windows in the country. It has a pale green bulb sometimes as large as an onion, bearing four or five wavy strap-shaped leaves often four or five feet long. The flowers, which are small and greenish in colour, form a spike from two to five feet long. It makes a grand suspending plant for a shady window, and is very effective.

*Oxalis multiflora*, *O. rosea*, and *O. Valdiviana*.—Charming little annuals for windows.

*Panicum variegatum*.—A hardy stove variegated grass, excellent for basket and bracket work indoors, and fine for plant case. Propagate by cuttings in heat.

*Pansy*, or *Heart ease*.—A numerous useful class of hardy bedding plants indispensable for window and balcony boxes, making a gorgeous display during spring and early summer. Flowers blue, white, and yellow. They are all of easy cultivation. Propagate by cuttings and seeds. GREAT BRITAIN.

*Passiflora carulea*, the blue Passion-flower.—A splendid hardy stove climber suitable for windows and warm south walls. Excellent decorative plant. Flowers blue, sometimes bearing yellow egg-shaped fruit in favorable situations. The foliage, flowers, and fruit are excellent for decorative purposes. Propagate by layers in heat. BRAZIL.

*Petunia*.—A splendid class of showy bedding plants,

double and single flowering. Gorgeous plants for balconies and windows. Flower various. Propagate from seed and cuttings in gentle heat in spring. SOUTH AMERICA.

*Perilla Nankinensis*.—A handsome bronze-foliaged plant, especially suitable as a contrast plant on balconies. Raise from seed in gentle heat in spring. CHINA.

*Phlox Drummondii*, *Drummond's annual Phlox*.—One of the most adaptable annuals grown. Good for all purposes, in window and balcony decoration. Flowers various. Raise from seed in gentle heat in spring. TEXAS.

*Polygala*.—Showy greenhouse shrubs suitable for indoor decoration. Flowers purple and violet, pea-shaped. There are many varieties, all suitable as indoor plants. Propagate from seeds or cuttings in gentle heat. CAPE OF GOOD HOPE.

*Portulacca*.—A class of succulent annuals remarkable for brilliancy and richness of colour, suitable for pots, boxes, vases, brackets, baskets, and rock-work. They are of a low trailing fleshy growth, and require very little water. Flowers various. Raise from seed in gentle heat and prick off. N. AMERICA.

*Primula*.—A very numerous class of herbaceous plants more or less hardy. The *Chinese Primula* is the well-known greenhouse variety, largely used for room decoration. *P. cortusoides amœna* is a charming early flowering kind. *P. Japonica*, of late introduction, is nearly hardy, with magnificent variously coloured spikes of flower. *P. vulgaris* is the common British

species. The garden varieties of *Polyanthus* contain many lovely flowers, while *P. auricula* is the *Dusty Miller* of cottagers, with white powdered leaves and variously coloured flowers of great beauty. They all make good pot plants, and the common hardy species do well in boxes on the balcony. Propagate by seed and division. CHINA and EUROPE.

*Pyrethrum parthenifolium aureum*, the *Golden Feather* of the flower garden.—Hardy and free-growing; very good for edging boxes. Requires repeated pinching to keep it dwarf and prevent it from flowering. Raise from seed in spring, and prick out. CAUCASUS.

*Rhapis flabelliformis*.—A very pretty miniature Palm suitable for the decoration of rooms, and a good table plant. Requires plenty of water while growing. Propagate by division. CHINA.

*Rhododendron*.—A class of lovely, handsome, free-flowering shrubs, splendid for balcony and hall decoration, having a gorgeous display of bloom during early summer. They require good drainage and their roots should be kept cool and moist. LEVANT.

*Ricinus*, the *Castor oil plant*.—A class of truly noble-looking annuals of stately robust growth, varying from four to eight feet in height, having large vine-like leaves of bright glossy green or bronze. Noble plants for balconies. Sow in heat in spring, and pot off; afterwards give a liberal shift into large-sized pots. AFRICA.

*Ribes sanguineum*, the *Red-flowering currant*.—A free-flowering hard yshrub suitable for balconies. It has a charming appearance in spring when laden with

a profusion of its rosy reddish flowers, lightened up by its bright green foliage. The white variety is also lovely. Flowers useful for cutting for ordinary decorative purposes. Propagate by cuttings and layers. N. AMERICA.

*Rosa*, the *Rose*.—A well-known class of free-flowering shrubs; the favourites of every one. There are numerous varieties. The *Noisetti* and *Banksian roses* are the best climbers for walls and trellises. The *Tea-scented Roses* are the favourite pot varieties. The old fashioned *red China Rose* is the best perpetual bloomer for windows. They all require good feeding and plenty of water. Propagate by budding and cuttings.

*Salvia splendens*, *S. coccinea* and *S. patens*.—Beautiful window and balcony plants. *S. splendens* has fine large scarlet flowers. *S. splendens compacta* is the finest *Salvia* grown, and a most profuse bloomer. *S. patens* is the finest blue flower we have. Propagate by roots, seeds, or cuttings in gentle heat. MEXICO.

*Saponaria calabrica*, the *Rosy soapwort*.—A pretty free-growing annual, bearing a profusion of rosy flowers. This and the white variety, *S. calabrica alba*, are showy window and balcony annuals, easily raised from seed, and continuing in bloom all summer and autumn. CALABRIA.

*Senecio purpurea*.—A first-class annual for hanging baskets. Foliage, bright green. Flowers, showy purple. Hardy, grows freely and is easily raised from seed. EUROPE.

*Senecio (cacalia) mikanooides*, the *German Ivy*.—A quick-growing plant having bright glossy foliage and

dense clusters of yellow flowers, suitable for training on trellis-work round windows, for hanging basket and for covering leafy screens. There are several other varieties of *Scandent senecios* worth growing, as basket or bracket plants. Propagate by cuttings in spring.

CAPE OF GOOD HOPE.

*Saxifraga sarmentosa*, *S. Fortunei*.—Excellent basket and bracket plants. *S. sarmentosa* is the Aaron's beard of the cottagers, or the *Sailor plant*. The pink variegated variety of *S. Fortunei* is lovely. Propagate by division.

*Statice*.—A charming class of everlastings. Excellent pot plants for windows and rooms. Propagate by division and seed. EUROPE, CHINA, and AMERICA.

*Tradescantia zebrina*, the *striped spider-wort*.—An excellent trailing plant for all indoor purposes. Foliage silvery, striped with bronze and deep purple underneath. Flowers blue. Of easy cultivation. Propagate by cuttings. VIRGINIA.

*Tropæolum majus*.—A well-known hardy annual easily raised from seed. The *Tom Thumb* varieties are all good pot plants for decoration. PERU.

*Tropæolum pentaphyllum* is a highly ornamental outdoor climber with trefoil foliage and handsome bloom. CHILI.

*Tropæolum tricolorum* is a lovely old-fashioned greenhouse pot climber, suitable for window trellis and basket work. VALPARAISO.

*Tropæolum Lobbianum* is an elegant small-leaved slender climber suitable for trellises. COLUMBIA.

*Tropæolum peregrinum*, or *Canary-bird creeper*.—

The well-known yellow-flowered annual climber is very showy and excellent for covering walls and trellises.  
PERU.

*Vallotta purpurea*, the *Scarborough Lily*, is a well-known free-flowering amaryllis of easy culture in windows, and a splendid decorative plant, with ever-green foliage. Flowers scarlet, remarkably effective, borne on stems 12 to 15 inches high. It does not require to be disturbed in its pot for years; needs plenty of water while in active growth, but very little during winter. Propagate by offshoot bulbs. CAPE OF GOOD HOPE.

*Verbena*.—Deservedly a universal favourite. A grand bedding plant and first rate for balconies and window boxes. Flowers various. Low trailing habit of growth. Of easy culture. Propagate by cuttings in heat during spring. Placed outside in a shaded spot during summer. There are many varieties, notably *V. venosa*, a half-hardy perennial, with rosy mauve flowers, from BUENOS AYRES.

*Veronica*.—A very ornamental class of green and variegated half-hardy greenhouse shrubs, suitable for balconies and the decoration of halls and vestibules. They are graceful in habit and cheerful in bloom. *V. blue gem* is a compact, dwarf, free-blooming variety. Flowers blue and white. Propagate by cuttings.  
NEW ZEALAND.

*Vinca major*, the *Greater Periwinkle*, is a well-known hardy free-growing trailing plant, very good for planting in window boxes along with small shrubs for the winter. There are several beautiful variegated

varieties of this plant. Mixed together they form a lovely fringe on a balcony front during winter. Flowers blue. Propagate by division and cuttings. EUROPE.

*Vinca minor*, the *Lesser Periwinkle*, is not so robust in growth as the former, and more slender in habit. It flowers freely during spring from the erect young growths. Flowers blue and white. There are several double and variegated varieties of this plant. They are all suitable for window and balcony work; also for hanging baskets during winter. EUROPE.

*Viola*.—A splendid class of spring and summer bedding plants, similar in habit and form of flower to *Pansies* or *Heartsease*, though freer flowering. They are extremely showy flowers and excellent decorative plants. Propagate by cuttings and seed. GREAT BRITAIN.

*Vitis vinifera*, the *common Grape Vine*, is one of the best of town climbers for covering walls and balconies. It has extremely elegant fresh green foliage and hangs in graceful festoons from its supports. Some varieties of hardy Grapes fruit well outside near London, and its value is greatly enhanced in them. Propagate from eyes, layers, and cuttings in gentle heat. ASIA, EUROPE, and AMERICA.

*Yucca*.—A class of hardy and half hardy succulent plants of handsome forms of growth and gorgeous flowers, forming splendid decorative plants for the balcony and halls, passages, and vestibules. Many of them are quite hardy during our severest winters. Grown in tubs on balconies during winter they are

very handsome. They require no water during winter. The best are the following :—

*Yucca aloifolia*, *Y. filamentosa*, *Y. filamentosa variegata*, *Y. glauca*, and *Y. quadricolor*.

*Zea Mays variegata*, the variegated *Japanese Maize plant*, has large handsome golden-striped foliage and is a splendid decorative plant. Raise from seed in gentle heat. JAPAN.



ORNAMENTAL PLANT STAND.

52





